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Charlotte 1887 - " 32 -
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# MINUTES

—OF THE—

# THIRTIETH ANNUAL MEETING

—OF THE—

# MEDICAL SOCIETY OF NORTH CAROLINA.

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FIRST DAY—MORNING SESSION.

TARBOROUGH, N. C., May 15th, 1883.

The Medical Society of the State of North Carolina met in the Opera House, in Tarborough, N. C., at 11 o'clock A. M., Tuesday, May 15th, 1883.

Dr. L. L. Staton, from the Committee of Arrangements, called the Society to order, and prayer was offered by the Rev. Mr. Wailes, of Tarborough.

Dr. N. J. Pittman introduced Mr. Donnell Gilliam, of the Tarborough bar, who delivered the address of welcome in behalf of the citizens and the profession.

Mr. Gilliam said:

*Mr. President and Gentlemen of the Medical Society:*

In behalf of the local Medical Society of this county and the citizens of Tarborough, I extend to you a most cordial welcome. It is gratifying to our pride to entertain such honored guests, and it is our pleasure to contribute all our powers of entertainment to minister to your pleasure and enjoyment. Whatever can prove of interest or pleasure, or in any manner conduce to your enjoyment, is sure

10232

to engage the best endeavors of the courteous members of the local Society, to whom is especially entrusted your entertainment. The citizens of Tarborough propose to join them in this pleasant duty, yet they congratulate themselves upon committing you to the care of the local members of your profession so that you cannot but depart with the most delightful impressions of our town. I do not wish to anticipate you in these impressions, and present in the unmeasured language of pride the beauties and attractions of our home, but rather leave you to those courteous gentlemen to experience them for yourselves. Pride is its own chronicler, and I would not offend against the gentle virtue modesty; yet with all becoming observance of it I wish to set forth what we consider our just claims; which severally numbered are these:

That our town is the prettiest in the State, except, of course, the one in which each of you respectively reside.

That our people are the cleverest—and here we are willing to admit of the same exception.

That our doctors are the politest and smartest. That our young ladies are the sweetest and most accomplished, and we respectfully submit, that in this particular, we will hear of no exception.

These demands sound very unpretentious in our ears, yet if you are not perfectly ready to accede to them, we do not mind intimating that we seriously insist only upon the last; and if the members of this Society—I mean those yet sensible to those finer feelings of the soul stirred by woman's grace and loveliness, and, of course, there are none others present, for that is a feeling common to us all—will dare venture—and I use these words advisedly—to an encounter in Cupid's warfare with these young ladies, I am satisfied they will be ready to resolve, by an unanimous vote, that for pretty, fascinating, captivating young ladies, Tarborough, can't be beat.

Gentlemen of the Society, while I am at a loss to understand why I should have been chosen to speak the words of welcome to you on this occasion, I am in no measure surprised that the legal profession should have thus been honored.

It must be gratifying intelligence to you to know that medicine and law are old associates and partners, and certainly it is but natural that you should wish to commemorate this highly honorable connection. In those benighted times of mediæval history, when superstition and ignorance encompassed the earth, and learning like a sinking

star had vanished before darkest night, the germs of knowledge were preserved by the few; and when violence and disorder were hushed in the ruin of the social state, these few advanced with their magic wand of power to reïllumine the earth and revive social order. They applied themselves to three services which were considered of most consequence, to man—the protection of his property, the care of his body and the salvation of his soul. Thus, in early times we see joined in one class three distinct modern professions. It would, no doubt, be an interesting subject for speculation, to inquire how great were the benefits derived by the Church from this early and intimate association, with the two very pious and respectable professions of law and medicine, but we leave this for other hands. So from early times humanity has been the special property of the doctor, the lawyer and the preacher; and though in modern days these professions have become separate and distinct, yet the doctor and lawyer retain still a joint interest in man, the one in his body, the other in his pocket book, while the poor preacher has been postponed, as we lawyers say, to a remainder, on the termination of the life estate, in the soul.

But I wander from my duty and purpose. An address of welcome, I conceive, should consist not only in breathing courtesy, but should serve also to proclaim the honors of the guests. This is indeed a most engaging subject, one inviting the richest gifts of eloquence and graces of oratory, one admitting of unmeasured panegyric.

Among the marvelous achievements of human progress and attainment of human capabilities, no science has proceeded to a more complete and rounded development, and earned a meed of greater glory, than that of medicine.

In the dim traditions of mythology the god of medicine triumphed over death and by his glorious deeds made emulous mission amongst the god's themselves, and drove great Jupiter to faction. Medicine has indeed triumphed over death. It has grappled with and vanquished countless forms of disease that assail the human race. It has banished plague and pestilence from the face of the earth. It has mitigated the disasters and calamities of life. It has warded off the shafts of disease that shoot across the atmosphere of human existence. It has soothed the dying and relieved the suffering. It has invaded the dismal abodes of poverty and despair and dispelled noxious and infectious disease. It has carried the wholesome and salutary influence

10232

of light and air to the houses of toiling humanity. It has sustained the human frame under the wear and weariness of incessant toil and mad pursuit of earthly gain. It is, indeed, the staff of life. In the classic beauty of ancient poetry, medicine was conjoined with music, for in poetic fancy medicine attuned the curious harp of man's body to sweet accord with nature.

There should be no jar or violence to that mysterious frame ; no dissonance nor sudden snapping of the silver cords ; but in the orderly course of nature the golden bonds of existence should be gently loosened by the hand of time and the imprisoned spirit wafted on its eternal flight. In the early part of the year 1666, within the very heart of that great city, London, appeared that painful and deadly malady, the plague. The hand of a master has pictured what happened in those dismal months; and in that truest of fictions, *The History of the Plague Year*, Defoe shows Death, with every accompaniment of pain and terrror, stalking through the streets of old London, and changing their busy hum into a silence broken only by the wailing of the mourners of fifty thousand dead ; by the woful denunciations and mad prayers of fanatics; and by the madder yells of despairing profligates. Our forefathers had their own way of accounting for this terrible calamity. They submitted to the plague in humility and penitence, for they believed it to be a visitation of Divine wrath. It would have astounded that ignorant people to have announced to them what modern science has demonstrated—that the plague was not a Divine judgment, but that they themselves were the authors of it, and that they must look to themselves to prevent the recurrence of calamities, to all appearance so peculiarly beyond the reach of human control. So evidently the result of the wrath of God.

Modern science has given us the explanation of this. It has taught us that pestilences will only take up their abode among those who have prepared unswept and ungarnished residences for them. That cities must have narrow, unwatered streets, foul with accumulated garbage. That houses must be ill-drained, ill-lighted, ill-ventilated. That subjects must be ill-washed, ill-fed, ill-clothed. Modern medical science has taught us something of nature, and we partly obey her. Because of this partial improvement of our natural knowledge and that fractional obedience, we have no plague but, because that knowledge is still very imperfect and that obedience is

yet incomplete, typhus is our companion and yellow fever our visitor. It is not presumptuous to express the belief that, when our knowledge is more complete and our obedience the expression of that knowledge, the earth will be relieved of all distempers, and human life no longer required to run the gauntlet of every disease—for the triumphs of the past are but the *earnest* of what shall be. "To *have done* is to hang, quite out of fashion, like a rusty mail in monumental mockery."

Truth has no bounds, and as well might man think to build a tower from the top of which to grasp Sirius as prescribe a limit to the explorations of science. It is a mere spark of human intelligence that now shines amidst the abyss of the unknown and unknownable, but time will increase it to a luminous flame that will reveal the hidden secrets and illumine the mysteries of creation. We call this an age of improvement, an age of progress. It is so. But the Italians in the age of Leo X said the same of theirs. The Romans in the age of Cicero made the same boast; and the Grecians indulged the same vanity amidst the splendor, wealth and refinement of the age of Pericles. Art and science are progressive and infinite. Newton counted 3,000 fixed stars. Herschell pointed his great telescope to the heavens and 250,000 stars passed through its field in *fifteen minutes.* The Chaldean shepherd counted the hours of the night upon the face of the starry heavens and gazed in stupid awe and wonder upon the majestic lovliness of the firmament. Modern science has explored that untravelled realm far beyond the utmost bounds of human thought and brought back the secret of the spheres. Medical science moves in the van of all the sciences. It advances fearlessly to its encounter with the enemies of nature, and each hour records its daring triumphs. The republics of ancient times honored the votaries of medicine with gifts of golden crowns, initiation into the sacred mysteries, and with the dignity of free citizenship, your honors of to-day are not less illustrious. All greatness has an enduring monument. The fame of Newton is written on the face of heaven in the indestructible laws of nature. The fame of Franklin is borne on the roll of the retreating thunder. Your fame is lasting, imperishable. It is perpetuated in God's noblest handiwork, the races that inhabit the earth.

Gentlemen of the Society, I will detain you no longer. The

theme is inexhaustible, and to dwell longer upon it would, I fear, tire your patience.

> "Sirs, you are very welcome to our home,
> This must appear in other ways than words,
> Therefore, I scout the breathing courtesy."

Dr. J. K. Hall, the President, briefly responded.

The Secretary called the roll, and the following gentlemen answered to their names:

Dr. N. J. Pittman, Tarborough; Dr. S. S. Satchwell, Rocky Point; Dr. J. R. Mercer, Tarborough; Dr. A. B. Pierce, Halifax; Dr. H. W. Faison, Faison's Depot; Dr. Allman Holmes, Clinton; Dr. J. J. Summerell, Salisbury; Dr. P. E. Hines, Raleigh; Dr. A. G. Carr, Durham; Dr. J. K. Hall, Greensborough; Dr. Geo. A. Foote, Warrenton; Dr. F. M. Rountree, Kinston; Dr. Chas. J. O'Hagan, Greenville; Dr. J. W. Jones, Wake Forest; Dr. Wm. R. Wood, Scotland Neck; Dr. J. H. Hicks, Faison; Dr. M. T. Savage, Scotland Neck; Dr. Thomas F. Wood, Wilmington; Dr. Thomas C. Powell, Rocky Mount; Dr. Geo. L. Kirby, Goldsborough; Dr. J. P. Sugg, Tarborough; Dr. Chas. Duffy, Jr., Newberne; Dr. R. F. Lewis, Lumberton; Dr. C. S. Killebrew, Tarborough; Dr. W. T. Ennett, Burgaw; Dr. John McDonald, Washington; Dr. L. L. Staton, Tarborough; Dr. Geo. S. Lloyd, Tarborough; Dr. J. M. Hadley, La Grange; Dr Jos. Graham, Charlotte; Dr. Thomas J. Moore, Richmond, Va.; Dr. J. H. Baker, Tarborough; Dr. T. D. Haigh, Fayetteville; Dr. L. J. Picöt, Littleton; Dr. David N. Sills, Castalia; Dr. W. C. Murphy, South Washington; Dr. E. J. Thorpe, Rocky Mount; Dr. D. W. Bulluck, Whitakers; Dr. W. H. Whitehead, Battleborough; Dr. C. W. Eagles, Sparta; Dr. R. A. Sills, Nashville; Dr. R. H. Speight, Tarborough; Dr. W. C. McDuffie, Fayetteville; Dr. Geo. W. Long, Graham; Dr. Richard H. Lewis, Raleigh; Dr. W. R. Wilson, Townesville; Dr. F. W. Potter, Wilmington; Dr. W. P. Exum, Wayne County; Dr. E. H. Hornaday, Willow Green; Dr. I. Wellington Faison, Mt. Olive; Dr. A. W. Knox, Raleigh; Dr. J. T. Sledge, Greenville; Dr. R. H. Hargrove, Robersonville; Dr. Julian M. Baker, Tarborough; Dr. Richard Dillard, Jr., Edenton; Dr. L. M. Powers, Plymouth; Dr. L. W. Hunter, Charlotte; Dr. W. W. K. Anders, Gravel Hill; Dr. E. T. Speed, Tarborough; Dr. W. P. Mercer, Toisnot; Dr. J. L. Nicholson, Richlands; Dr. John Whitehead,

Salisbury; Dr. J. A Collins, Enfield; Dr. C. M. Pool, Salisbury; Dr. G. E. Matthews, Ringwood; Dr. T. S. Burbank, Williamston; Dr. Thomas Hill, Goldsborough; Dr. Thomas M. Jordan, Hillsborough; Dr. A. J. Battle, Earpsborough; Dr. J. R. Irwin, Alexandriana; Dr. Henry B. Ferguson, Litttleton; Dr. J. T. Strickland, Thomasville; Dr. J. B. Gunter, Durham; Dr. Marcus C. Hunter, Huntersville; Dr. J. R. McClelland, Mooresville; Dr. W. C. Galloway, Snow Hill; Dr. J. R. Staton, Tarborough ; and honorary member Dr. R. Dillard, Edenton.

The President apppointed the following committees:

COMMITTEE ON CREDENTIALS.

Dr. N. J. Pittman, Tarborough; Dr. Chas. J. O'Hagan, Greenville; Dr. W. H. Whitehead, Battleborough.

COMMITTEE ON FINANCE.

Dr. J. W. Jones, Wake Forest, Dr. John McDonald, Washington; Dr. R. H. Speight, Tarborough.

The President invited all the ex-Presidents present to a seat on the stage.

Dr. O'Hagan introduced Drs. Shields and Wheat delegates from the Virginia Medical Society and invited them to a seat on the floor, and to participate in the deliberations.

PARTIAL REPORT OF COMMITTEE ON CREDENTIALS.

The following gentlemen having passed successful examinations before the Board of Medical Examiners, are recommended for membership in the Society:

Dr. D. R. Schenck, Hillsdale, Guilford County, N. C.
" S. H. Rogers, Raleigh.
" H. I. Clark, Hamilton, Martin County.
" B. L. Long, Hamilton, " "
" J. H. Anderson, Tarborough.
" G. L. Wimberly, Tarborough.
" S. T. Johnson, Tarborough.
" H. H. Whitaker, Battleborough.
" F. R. Harriss, Henderson.

" H. B. Marriott, Battleborough.
" J. C. Braswell, Whitakers.
" W. W. Faison, Goldsborough.
" N. H. Street, Pollocksville.
" J. A. Stevens, Clinton.
" W. O. McDowell, Scotland Neck.
" Oscar L. Gregory, Halifax.
" Wm. H. Bobbitt, Rockingham.
" Wm. L. Hudson, Hawley's Store.
" J. H. Scarborough, Trenton.
" P. J. Macon, Warrenton.
" Jas. M. Hodges, Mt. Olive.
" E. G. Moore, Toisnot.
" M. O. Bunn, Wilmington.
" Isaac M. Taylor, Chapel Hill.

N. J. PITTMAN,
C. J. O'HAGAN, } Committee.
W. H. WHITEHEAD,

Adjourned to meet at 3 o'clock.

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FIRST DAY—AFTERNOON SESSION.

The Society was called to order at 3 o'clock. Dr. Hall, the President, in the chair.

Dr. Picot read, for Dr. R. L. Payne, Jr., the report of the Section on the Progress of Surgery.

Dr. Foote moved its reference to the Publication Committee.

Dr. L. L. Staton exhibited a case of Abdominal Abscess with two fistulous openings, one just underneath the umbilicus, and the other in the right iliac region, both of which openings discharged pus and fecal matter. This is the history:

The young man here presented has been a sufferer from a trouble that we rarely meet, and when found, it is often obscure in its commencement, difficult of diagnosis, and frequently the practitioner finds himself a little confused as to the proper course to pursue.

The history of the case, as gathered from the young man, is briefly, as follows:

Three years ago he was quite ill with what was thought to be

fever, unable to lie in any position except upon the back, with thighs flexed upon the abdomen, the pain great and bowels constipated, notwithstanding frequent and large doses of the most drastic cathartics. He does not remember all that transpired during his illness, on account of frequent unconsciousness. When he presented himself to me, he was anæmic, and almost reduced to a skeleton—unable to straighten, owing to abdominal adhesion and inflammation. Physical examination revealed two large fistulous openings—one just below the umbilicus, the other in the right iliac region, from both, fæcal matter and pus flowed freely. Diagnosis: Typhlitic abscess, in which the matter had been allowed its own time and way of exit. Knowing the tendency of all such cases to recover, I pursued the conservative course, by supporting the abdomen and using compresses over the fistulous opening.

Now, the points presented are interesting and important:

1st. What are we to do to prevent the formation of such abscesses?

2d. When formed, how and when should the pus be removed ?

3d. How are we to treat the fistulous openings ?

4th. If any surgical interference, what operation ?

Now, of the 59 cases reported to the Surgeon-General of the U. S., 50 of that number recovered, 9 remained unhealed. The time required for the healing of 46 of this number was: 17, one month ; 28, one year; 5, one to four years.

Nature unaided by surgical interference has failed to relieve the young man, and while his condition is greatly improved and he is to-day comparatively comfortable, nevertheless, he is a great sufferer and the inconvenience he often undergoes cannot be realized.

He now presents himself for your consideration, and a free discussion is most earnestly desired.

Dr. Haigh reported a case somewhat similar as to appearances. He saw no fæcal matter, but the opening had a decided fæcal odor. The patient recovered.

It began by a very severe abdominal pain, and a state so alarming as to indicate impending death. The symptoms resembled those of obstruction of the bowel. A large pus cavity formed which was opened by free incision. The escaping pus had a strongly fæcal odor. He desired to learn the history of this case, but Dr. Staton could not say whether or not it was ushered in by symptoms of obstruction.

Dr. O'Hagan thought that, perhaps, Dr. Haigh's case was not one of fæcal fistula succeeding perforation of the intestine, but one of perityphlitic abscess. All pus from these abscesses have a decidedly fæcal odor. In this case he thought the best results would be obtained by treating the fistulæ with probes covered with fused nitrate of silver after Lente's plan.

Dr. Moore thought that thorough cleanliness and washing out the fistula with weak solution of carbolic acid should be resorted to.

Dr. Jones said the case reported by Dr. Staton came under his care. It began with obstinate constipation, and fæcal matter passed by one of these openings.

Dr. Foote said he would follow the German surgeons and cut the two openings into one and burn it out so as to stop, at least, the upper opening.

Dr. McDonald thought it a hazardous operation to attempt to lay open the tract, and he would do as Dr. O'Hagan had suggested as to treatment.

Dr. McDuffie said he would try to heal these fistulæ by cauterization.

Dr. Hines concurred with Dr. Staton in his treatment, except that he would wash the fistulæ with carbolic acid and employ some abdominal pressure.

REPORT OF COMMITTEE ON FINANCE.

The Finance Committee after examining the books of the Treasurer find there was a balance on hand at the last session of the Society of.....$145 00
Amount received at the session of Society..... 320 00
Amount received by letter from members..... 102 40

Total.....$567 40

Contra.

To amounts paid for publishing Transactions, postage and mailing, Secretary and Treasurer's compensation, Incidentals, &c., &c.....$496 45

Balance in hands of Treasurer.....$ 70 95

We recommend the same assessment as heretofore ($2) two dollars per capita, and that the Secretary and Treasurer be paid the same salary as before.

J. W. Jones,
R. H. Speight,
John McDonald, } Committee.

Adjourned to meet at 8 o'clock.

FIRST DAY—NIGHT SESSION.

The Society was called to order at 8 o'clock, to hear the annual address by the President, Dr. J. K. Hall. The address was the nature of an essay on the *Etiology and Treatment of Typhoid Fever.*

Dr. Hall reviewed the nature of the disease as seen by him in 30 years of practice, and gave the result of his experience as to treatment.

Referred to the Committee on Publication.

Adjourned until to-morrow morning 10 o'clock.

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SECOND DAY—MORNING SESSION.

Society assembled at 10 o'clock. President, Dr. Hall, in the chair. Meeting opened with prayer by Rev. Mr. Swindell.

OBITUARY COMMITTEE.

Dr A. Holmes, of Clinton, made the report of the Obituary Committee. He regretted that he could not get the information necessary to make a full report. There had been misunderstanding, neglect or indifference, on the part of friends of deceased members, and he would ask the indulgence of the Society, to allow him to make his report directly to the Committee on Publication.

On motion of Dr. Wood it was ordered that the Committee on Obituaries be allowed time to correct,amend and amplify their report, and give it directly to the Committee on Publication.

The Conjoint Session of the North Carolina Board of Health and the Society being fixed for this hour of Wednesday morning ; owing to the absence of several members, voluntary papers were announced to be in order.

CASE OF ARTERIO-VENOUS ANEURISM OF THE POSTERIOR AURICULAR ARTERY.

Dr. Charles Duffy, Jr., read for his brother, Dr. Frank Duffy, of Newberne, the report of a case of posterior auricular aneurism, occurring in their practice. Two years previous to consulting them for the trouble, she sustained an injury in the region of the aneurism,

by falling against the edge of a door. Ferrotypes illustrating the case were presented.

Referred to the Committee on Publication.

On motion of Dr. McDuffie, Dr. Satchwell, of Pender, was permitted to read a paper on "*The Progress of the Antiseptic Treatment of Disease.*"

The paper was a lengthy review of the growth of antiseptic treatment in medicine and surgery.

Referred to the Committee on Publication.

Dr. M. L. James, of Richmond, Va., a visitor from the Medical Society of Virginia, was, on motion of Dr. O'Hagan, invited to a seat on the floor, and to a participation in the deliberations.

Dr. Thomas J. Moore introduced Dr. James as Dean of the Faculty of the College of Virginia.

Dr. James appropriately responded, giving an account of the efforts of the new political party in his State to subvert this college to their own designs and purposes. After a manful resistance the Court of Appeals decided the change attempted, to be illegal, fully substantiating the old Board. This, Dr. James considered as not only a triumph for the Medical College, but for the cause of education in the State. He closed by giving a history of the Medical College of Virginia. His remarks were greeted with applause.

### COMMITTEE ON NOMINATIONS.

The President appointed the following Committee on Nominations:

Drs. N. J. Pittman, J. J. Summerell, W. C. McDuffie, George A. Foote, and H. W. Faison.

### REPORT OF COMMITTEE ON CREDENTIALS.

The Committee on Credentials beg leave to submit this additional report. We find the following gentlemen qualified for membership and recommend their election:

Dr. W. N. Smith, Scotland Neck.
" N. P. Bodie, Palmyra.
" D. B. McNeill, Shalotte.
" G. C. Edwards, Hookerton.
" E. M. Summerell, Salisbury.

Dr. K. M. Ferguson, Manchester.
" N. M. McLean, Shoe Heel.

N. J. PITTMAN,
C. J. O'HAGAN,
W. H. WHITEHEAD, } Committee.

CONJOINT SESSION OF THE MEDICAL SOCIETY WITH THE NORTH CAROLINA BOARD OF HEALTH.

The Society at 12 o'clock resolved itself into the Conjoint Session with the Board of Health.

On motion of Dr. O'Hagan, Dr. Satchwell, ex-President of the Board of Health, took his seat beside the President and presided over the meeting.

The first business in order being the election of new members, to fill the vacancy caused by the expiration of Drs. Chas. J. O'Hagan and George A. Foote.

Dr. Wood nominated DR. J. W. JONES, of Wake Forest, and DR. JOHN MCDONALD, of Washington.

Other nominations were called for, but none being made, on motion of Dr. R. H. Lewis, of Raleigh, Dr. W. C. McDuffie, of Fayetteville, was requested to cast the vote of the Society for the nominees. They were declared elected.

The Secretary then read his report.

*Mr. President and Gentlemen of the Medical Society:*

I had hoped to report to you that the State of North Carolina had recognized the value of the work performed by the Board of Health, in these five years of our organization. But such is not my happy privilege.

At the instance of Dr. J. W. Jones, of Wake Forest, that active friend and promoter of sanitary work, indeed the prime mover of the cause in the State, a meeting was called of the Superintendents of Health, and of all interested in the advancement of public health legislation, to meet in Raleigh, early in the session of the Legislature.

Circular letters were sent throughout the State, the Board without hesitation accepting the proposition made, recognizing in it an increasing interest in their work, and being willing to aid by all means in their power any movement looking toward an improvement of our status.

The following is a copy of the letter sent out:

NORTH CAROLINA BOARD OF HEALTH,
WILMINGTON, December 18th, 1882.

*Dear Doctor:*—Adopting the suggestion of Dr. J. W. Jones, of Wake Forest, the State Board of Health desires to obtain a meeting of the Superintendents of Health from all the Counties in the State, if possible, and trust that you will be able to be present in Raleigh on the Second Tuesday in January.

The Legislature will then be in session, and it is desirable that the law should be so amended as to make the State Board a working organization, and that the Superintendents of Health should have better defined duties.

The State Board suggests that the following, among other items, are matters of importance to secure the continuance of the work in anything like a vigorous manner :

1. The law regarding the Record of Vital Statistics at the annual tax-listing should be amended so that some responsibility for correct returns should be put upon the tax-lister.

2. The salary of the Superintendent of Health should not be fixed, as by the present law, but left to the Boards of County Commissioners and Town Corporations.

3. Executive power should be vested in Superintendents of Health in compelling the abatement of nuisances ; the isolation of persons sick with pestilential communicable diseases ; in directing the sanitary conduct of penal and charitable county institutions, such as jails, poor-houses and houses of correction. The State Board of Health should be also entrusted with the duty of quarterly examinations of the State Capitol, Insane Asylums, Institution for the Deaf and Dumb and the Blind, and the Penitentiary.

4. Vaccination should be promptly secured by establishing a permanent department, from which vaccine could be expeditiously distributed in time of need. Modified compulsory laws should be established.

5. A modification of the rules for Coroner's Inquests should be discussed, and the conditions stated in which the Superintendent of Health, as Coroner's physician, should be expected to make *post-mortem* investigation, and a scale of fees established for the service.

6. A sufficient appropriation should be made for the expenses of the Board. Not less than $3,000 a year would be enough to promote the work in usefulness. In addition to this, printing should be allowed the Board.

How to perfect these provisions, and how to forecast the future work of the Board, is the question which the State Board hope to hear discussed by the County Superintendents of Health. Such experience as has been gained by the gentlemen who have labored so hard to promote their County work, will be necessary to our guidance for the future.

Please favor me with a reply to this circular, and signify your intention to be present.

Should you determine not to be present, please have an interview with your representatives in regard to our needs.

Yours, very truly,

THOMAS F. WOOD,

*Secretary Board of Health.*

Responses came from several gentlemen, signifying their intention to be present, and from all endorsing the propriety of making an earnest and concerted effort to obtain new statutory enactment.

The following report of the meeting is given as kindly furnished by Dr. J. D. Roberts, Secretary:

RALEIGH, N. C., January 10th, 1883.

Pursuant to a call of the North Carolina State Board of Health for a meeting of the County Superintendents of Health and the State Board, there met in the Yarborough House to-day the following gentlemen:

Drs. R. J. Noble, Selma; J. Summerell, Salisbury; J. M. Stansill, Rockingham; Isaac E. Green, Weldon; J. D. Roberts, Goldsborough; Thomas F. Wood, Wilmington; W. T. Ennett, Burgaw; G. A. Foote, Warrenton; C. Thomson, Jacksonville; J. W. Jones, Wake Forest and Prof. W. G. Simmons, Wake Forest.

At subsequent meetings the following gentlemen registered and participated in the discussions: Drs. H. Turner, Cameron, Moore County; J. F. Beall, Linwood, and J. G. Ramsay, Mt. Vernon, members of the General Assembly, and Dr. James McKee, Raleigh.

Dr. J. J. Summerell, was called to the chair, and J. D. Roberts requested to act as Secretary.

Dr. Summerell asked Dr. Wood, as being more conversant with the matter, to state the object of the meeting.

The matters for consideration by the conference were explained by the Secretary of the State Board, as follows:

The amendments required to make the present law operative, could be briefly stated. The Governor in his message called the attention of the General Assembly to the fact, that although the Constitution of the State required the formation of a BOARD OF CHARITIES AND CORRECTION, the law had not been complied with, and that practically no such Board existed. The Board of Health had been working out the problem under the law.

The following is from the Governor's message :

"STATE BOARD OF HEALTH AND BOARD OF PUBLIC CHARITIES.

"I beg to call your attention especially to the report of the Board of Health, and to ask for this organization more favorable legislation than it has heretofore received. The Board, animated by the humane desire to do something to guard the health and lives of the people, has worked for years without proper recognition from the State. It is time that something should be done in the way of pecuniary aid. I am sure they will not ask for anything unreasonable. In this connection, I desire to call your attention to Section 7, Article XI, of the Constitution, and to Chapter 94 of Battle's Revisal, on the subject of a 'Board of Public Charities.' There is not now, and has not been for years, any such Board, although it is expressly required. Such a Board could be made useful, if required to inspect our penal and charitable institutions, jails and other places where prisoners are kept confined, and make detailed reports to the General Assembly. The practical suggestion I wish to make is, that you make the State Board of Health the Board of Public Charities, and that you make a reasonable appropriation to pay the expenses of this Board when in the discharge of its public duties."

The Governor had shown a true appreciation of the service the Board of Health had rendered the State, in suggesting a coälescence of the two laws. He saw in the Board of Health the elements necessary to success, and in it a hope for the future of the constitutional requirements as regards the sanitary condition of the charitable and penal institutions of the State. The original law had been put in the hands of Dr. C. Tate Murphy, a former State Senator, and Chairman of the Board of Charities and Correction, but upon his withdrawal from the public service, the whole work had fallen into desuetude. Dr. Murphy had also been an ardent

supporter of the State Board of Health, until his failing health ended his career.

We do not forget that in the State of Massachusetts the Board of Health of that State, had been merged into the Board of Public Charities, thereby impeding the work; but that State did not have an organization like ours. There was no good ground upon which detriment to our Board of Health could be prognosticated, by a future merging into the Board of Charities and Corrections. For was it not true that the State Board by aid of its auxiliary county boards had already taken up the work of the sanitary supervision of the jails, work-houses and poor-houses of the State? The State Board is on record in its "First Biennial Report," showing with how much care the work has been done, making a very strong and favorable contrast with the unorganized work of the Board of Charities and Corrections, until the State Board of Health had demonstrated the practical working of a dead law, so that, the North Carolina Board of Health really had nothing to fear of a coälescence which had been unconsciously in existence several years.

After this explanation by the Secretary, a committee was appointed to make a new draft of the law, incorporating the amendments proposed in the Governor's message.

The substance of the proposed law is as follows:

1. The State Board of Health to assume all the duties set forth in the law creating the Board of Charities and Corrections.

2. The composition of the Board to remain as at present.

3. The State Board to take cognizance of the health interests of the State, making all investigations necessary to obtain information about the introduction and progress of epidemics; to be sanitary advisers of the State; to make inspection of State institutions; to pursue special studies appertaining to their work, and when necessary to call in the assistance of experts.

4. The members to be elected and appointed as formerly.

5. The officers of the Board to be a President, Secretary, and Treasurer, the Secretary to receive such compensation as the Board may allow.

6. The auxiliary County Boards to remain as at present, and their duties to be as prescribed by the law, and their salary to be left to the county and town authorities, but to be based upon the fees current in the county in which a Superintendent serves.

7. Directs the time of meeting of the State Board.

8. Provides for monthly reports of Superintendents to the Secretary of the State Board.

9. Refers to the conduct of inland quarantine, making the fine for its violation $200, and enjoining upon Superintendents to give all aid in their power to the maritine quarantine.

10. Directs the process for the abatement of nuisances dangerous to the public health.

11. Provides for the proper vaccination of persons coming under the care of the State and Counties; provides for a supply of vaccine to be kept by the Secretary; and asks for $200 for this purpose.

12. Provides for issue of Bulletins of warning, on matters appertaining to pestilential disease, and the means of preventing their spread ; also provides for the circulation of information upon all topics which in the discretion of the Board affect the health interests of the people.

13. About special meetings of the Board.

14. Provides for analyses of water, food, drugs, &c., by the Agricultural Department.

15. Asking the State for $3,000 annual appropriation, and printing, and stationery, necessary.

16. Repealing all laws conflicting with this.

The discussion of all the items entering into this bill was prolonged and earnest, and the final conclusion of the work reached, was left to the consideration of the friends of the Board in the Senate and House of Representatives.

On motion, a committee of five was appointed to re-write a bill, embodying these points, to be presented to the General Assembly for adoption. Committee: Drs. Wood, Jones, Foote, Green and Prof. W. G. Simmons.

Prof. Simmons offered a few remarks on the importance of the work of the State Board of Health.

On motion adjourned until 7½ P. M.

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YARBOROUGH HOUSE—7½ P. M.

Meeting called to order by Dr. Summerell.

Dr. Wood read the report of the committee and it was discussed by Drs. Foote, McKee, Turner, and others, by sections.

Quite a discussion arose as to Sec. 11 (in regard to serving papers on owners of premises to abate nuisance) and, on motion, the section shall read as in the original bill.

After much discussion as to amount of appropriation to be asked for, the sum was finally placed at $3,000.

On motion, adjourned until 9½ o'clock to-morrow morning.

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RALEIGH, January 11th, 1883.

Meeting called to order at 10 o'clock A. M. Dr. Summerell in the chair.

On motion, the chair appointed a committee of four (two to each house) to wait on the members of the General Assembly and solicit their influence in securing the passage of this bill.

On motion, Dr. Summerell was made chairman of both committees.

To visit the Senate.—Drs. Ennett and Foote.

To visit the House.—Drs. Jones and Green.

*Resolved*, That the bill be entrusted to Mr. Battle of the Senate and Mr. Bunn, of the House, to introduce.

Moved by Dr. Jones that the State Board of Health, and the County Superintendents of Health meet next, at the time and place of the meeting of the State Medical Society in the year 1884.

Adjourned to meet at 1½ o'clock P. M.

At 1½ P. M. the bill was read and discussed in consultation with Senator Battle, who promised to introduce it, and work to secure its passage.

On motion, adjourned.

J. D. ROBERTS, Secretary.

J. J. SUMMERELL, Chairman.

The action of the Board and members of the Conference did not cease with adjournment, but letters were written to members supposed to have influence in the Legislature, setting forth explicitly our aims, our progress, and necessities.

Unfortunately the bill which was introduced in the Senate did not come up until adjournment was impending, and it received only seven votes out of a possible 50.

If we are to judge of the temper of the House by the assurances

made to the members of the Congress, we believe it would have been wiser to have introduced the bill in the House.

Another mistake was, that we met in Raleigh too early in the session, before the machinery had been put smoothly in motion. Furthermore we should have waited to see the bill introduced, and then to have gone before the Committee to which it was referred to present our arguments. The discussion of the bill as reported in the *News and Observer* was too silly to deserve comment, except that it shows the great necessity of indoctrinating the people with the elementary knowledge of the means of public health, and then they will demand of their Representatives a more liberal extension of our powers and means.

On the part of the Society we need more active support. Passive support, we have. But milk-and-water acquiescence does not budge a burden as great as that we have undertaken. The Board needs aggressive, untiring help. It is the only hope of success. In those counties where work has been done, we see good results. In Mecklenburg County there has been some opposition stirred up, and it was from the Representatives of that county that all organized opposition came.

In New Hanover County our work is recognized as a part of the necessary machinery for public improvement. The Board of Health has the respect and confidence of the city and county, and the Superintendent gets salary enough to enable him to devote all of his time to the work.

## VITAL STATISTICS.*

The returns collected in 1881, under the law for the Registration of Vital Statistics, amounted to 346 pounds weight. Little progress was made in tabulating this mass of papers, until in last May Dr. J. D. Roberts, Superintendent of the Eastern Insane Asylum, kindly volunteered to complete the task. The report is herewith appended, and I only wish I could say of it, that it is valuable. But being the first-fruits of the law, the reports sent in were very badly made, and some of them not entitled to the slightest credence. The Board thus publicly desires to return their thanks to Dr. Roberts for his part of the work.

*Vital Statistics are omitted here and may be found in the Second Biennial Report.

## SMALL-POX VISITATIONS.

During the past year small-pox made its appearance in Wilson, Jones, Burke and New Hanover Counties.

In New Hanover County only one case appeared.

In March, the mate of a coasting schooner was received into the Marine Hospital with a slight indisposition, marked by a slight erythmematous bluish, which afterwards proved to be true pre-variolous erythema. Dr. F. W. Potter, Superintendent of Health of New Hanover County was notified, and he took immediate steps to prevent its spread.

The sick man was removed without delay to Mt. Tirza Small-Pox Hospital, four miles below the city, and visited daily. He died of the confluent disease on the 14th day.

Vaccination had a marked triumph in this case. Close examination revealed not the slightest vaccination cicatrix on the arm of the small-pox patient, while all of his vaccinated comrades escaped even the slightest sickness.

Vaccination had been so largely done in the Winter of 1881, that comparatively little of it was done, but the corporation made ample provisions for a thorough protection of every inhabitant of the county.

In April small-pox broke out in Graham and Clay Counties. Great excitement was created. Appeals came from these counties, through the Governor, for help. The letters were sent to the Board for action. The Secretary deemed it opportune to set forth to the applicants that the State had made no provision to furnish vaccine virus. That the law was practically inoperative even upon such a vital point ; they could now see the necessity of attempting to urge upon their representatives some adequate action, and not leave the burden upon a Board without funds. Vaccine was promptly sent them, with a number of the pamphlets on vaccination published by the Board. Request was made at the same time that they should send a report of the source of the introduction of small-pox, and also to reply at once if the vaccine after ten days was inactive, and freely offering such assistance as their circumstances demanded.

If this case of small-pox happened in the house of the representatives of Clay and Graham, probably we may get attentive listeners when we ask for amendments.

Our old work is receiving recognition at the hands of the commercial public. In a recent report made to the Produce Exchange of Wilmington, by its President, Mr. James Sprunt, the pamphlet issued by the Board entitled "A Guide to Shipmasters," &c., was reprinted in full for the information of the Exchange, and for the purpose of calling attention of foreign vessels trading with Wilmington to the means of prevention of river fever.

Much new work has not been done, as the deficit has already exceeded $1,000, and it was considered prudent not to incur additional expense, but report the state of affairs to this Conjoint Session of these bodies.

It remains now for you to say what shall be done for the future. No aid can be expected from the Legislature, if at all, at an earlier day than January 1885. If we vacate our position by dissolving our organization, the hope for public health work will be retarded indefinitely, and in fact there would be no prospect of reviving it, until some great epidemic disaster should overtake us. We have done too much work to throw it away. We have made ourselves felt as a useful body, and by strict economy we may be able to keep our work alive for another two years. As the executive officer of the Board, I confess freely that I know of no course we could pursue, which gives promise of better results. But still there may be some who think differently, and by making a thorough change, we might make headway. I can say for myself that I am not willing, personally, to be at more expense than I have already incurred, and if I am to continue the work for another two years, what is done, must be strictly such work as is designed to prevent the destruction of that already performed. I have no hesitation in saying, that if every county in the State had an active Board, the State Board could live and progress slowly; but most of our energy is devoted to keeping alive the auxiliary Boards. I respectfully submit that the State Board has a right to demand your active help.

At the conclusion of the report, a general discussion ensued upon the condition of the Board of Health.

Verbal statements were made by Drs. McDuffie, Duffy, Hines, Summerell, Haigh, McDonald, Foote, Holmes, Potter, Julian Baker, A. G. Carr, and Ennett.

It was elicited on discussion, that the organization of the County Boards were due in some cases

1st. To the small pay attached to an office in which there is so much work.

2d. To the semi-political influences brought to bear by the non-medical county officers, in the selection of the Superintendents and the award of pay for services.

3d. To a lack of knowledge of sanitary affairs on the part of county officials, and the people.

4th. To an indifference on the part of physicians not officially concerned, in the work of the County Superintendents.

5th. To too minute character of the reports required by the Secretary of the State Board.

On the other hand, in one or two counties where the law had been fully carried out the results were very beneficial, and the work of sanitation had been heartily endorsed by the people, and city and county authorities, and something like adequate compensation given. There was not so much a defect in the machinery of the law, as in the lack of proper appropriation for services.

The opinion of the necessity for County Boards of Health pervaded all the observations on the subject.

Dr. Wood, Secretary of the Board, concluded the discussion.

Dr. A. G. Carr, of Durham, inquired of the Secretary what was the proper way to organize a County Board of Health.

Dr. Wood replied: The essential requisite for the formation of a County Board is to have enough young, energetic, spirited doctors, who are willing to enter upon their work without prospect of reward, and to be patient with county and town officials. They must commence by informing themselves thoroughly about the law under which they were acting, and by studying perseveringly all the works on public hygiene they could find, and then indoctrinate the people with these principles. Before demanding salaries, they should set themselves to work immediately to show how necessary their organization was. If they could do this, they would find in most instances that the authorities would be liberal with them.

Dr. Wood thought that it was well to review the adaptability of the machinery of our law to the necessities of the counties. From enquiries made, it was evident that all did not understand the advantages of the law. It was very apparent from the beginning that to frame a law simply to look after the sanitary affairs of the county, would not have been entertained by the Legislature for a

moment. It became necessary, therefore, although objectionable, strictly speaking, to combine the office of public physician with that of sanitary officer. Moreover, this union of the two offices was a humane provision. For it was a well-known fact, demonstrated by Dr. Tate Murphy's extensive inspection of poor-houses and jails in many counties of the State, that the poor-houses while ostensibly asylums for the helpless poor, were as much penal institutions as the jails. That insufficient food, squalid filth, and general inattention, were fast degrading the poor wards of the county. That liberties of a shocking character between the sexes, and between the two races, was a flagrant enormity. That there was no escape from this state of things with the system of inspection in vogue at the time of the law. That visits were made to jails and poor-houses by grand juries at stated intervals, and at times when keepers of these institutions were on the lookout for them. A spasmodic attention to cleanliness was resorted to, and one case was known, where the keeper of the poor-house to make a good appearance and get official approval for his ample provision of food, stocked out his storehouse with groceries, which were returned as soon as court week was over. It seemed necessary, as well as expedient, to combine the office of sanitary manager of, and physician to the poor-houses and jails, to procure for these unfortunate people, at least merciful attention.

This, then, was the key-note of the situation. No county could get along without the aid of a physician to care for the poor and prisoners, and perform medico-legal post-mortem examination. It would be wise to engraft upon this necessity, a system of sanitary supervision,and charge the officer upon whom these functions fell with the duties of recording vital statistics.

How to work out this theory, and how to shape it so that it would carry conviction to the Legislature, was the engrossing theme five years ago, it is paramount now. That our system is a good one, we judge by the approval it has received from gentlemen who have been engaged in the work for years.

As the matter now stands, I doubt if it is legal for county authorities to employ any one to attend the penal and charitable institutions of the county, in any other way than that laid down by the Board of Health law. If this be so, then nothing is easier than to make the effort, provided that the doctors of the county will interest themselves. But here we come face to face with a great difficulty.

There is a lack of organization of very many counties. We have heard here, to-day, of the statement of the absence of societies in most counties. This must be remedied first. Personal ambition and rivalry, and apathy and laziness, must give way, and Societies and Boards of Health formed. We have an example in our State Society of what can be done by organization, and in some counties also there are exemplary societies. The work is entirely possibly. We have only ourselves to blame for not being heard in the State. Ours is an unselfish plan to better the condition of the people, and we will convince the people of it when we show the earnestness of our own convictions.

If Superintendents of health will daily attend to their records we will collect something in the aggregate of value. If they allow their observations to lay over for another day it will not be accurate. Some of the gentlemen complain that they can only give their individual observations in making the monthly reports. Of course this ought not to be so. It is culpable neglect of a public duty and a friendly office. But if it must be that monthly reports only contain the personal observations of the Superintendent, just make them as accurate as possible, and send them along. If you do not remember it let me remind you, that the printed statement of the condition of county public buildings contained in our *First Biennial Report* has caused many a miserable den of a jail to be renovated, and many a poor-house to rejoice in the luxury of a clean floor, pure air, and white-washed walls. But the statistics contained in your reports have a further value, in consideration of that other department of statistical record established by the efforts of this Board. I have mentioned in my report that there is a plan for collecting the statistics of births, and of deaths of persons dying with diseases dangerous to the public health. If this law is complied with properly, the tabulation of the material thus collected will serve to throw light upon the diseases prevalent in certain counties at certain seasons, and also show the number of deaths from the preventable diseases.

RESIGNATION.

Dr. A. G. Carr offered his resignation as Treasurer, because he had long filled the position to his own detriment. He was so much interrupted during the session of the Society that he had no opportunity to listen to the proceedings. He hoped that the nominating committee would find some one else. No action taken.

Adjourned to meet at 3 o'clock.

## SECOND DAY—AFTERNOON SESSION.

The Society was called to order at 3 o'clock. Dr. Hall, the President, in the chair.

Dr. Foote introduced the following resolution as amended by Dr. Thomas F. Wood, making provision for a conference between pharmacists and physicians:

" In consequences of the numerous fatal mistakes that have occurred in the State by the unintentional administration of poisonous medicine by physicians and druggists, and in the absence of any law on the subject ; therefore, be it

*Resolved by the Medical Society of North Carolina*, That the druggists and physicians be earnestly requested to keep all poisonous medicines in bottles or packages of such shape and character so as to be as readily recognized by the sense of touch as well as of sight; and

*Resolved furthermore*, That a Committee of Conference between the Medical Society of North Carolina and the North Carolina Pharmaceutical Association be appointed to take into consideration the question at issue and cognate questions bearing upon the subject.

The President appointed Drs Potter, Thomas and Bellamy Committee.

## REPORT OF THE CHAIRMAN OF THE SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Dr. Furgerson read his report as Chairman of the Committee on Materia Medica and Therapeutics.

Referred to the Committee on Publication.

## RAG-WEED (AMBROSIA) AS A STYPTIC.

Dr. Thomas Hill, of Goldsborough, read a paper on the Hæmostatic properties of *Rag-weed*, *Carrot-weed*, or *Ambrosia trifida*. He presented the specimen of the plant for identification as he did not claim to be botanically correct. Dr. Wood was asked to name it. He knew that it was an Ambrosia, but could not give the species without the flowering specimen.*

In conclusion of his paper, Dr. Hill remarked that he thought more attention ought to be paid to the study of indigenous plants. Many

*Since determined as *A. artemisiæfolia*, *A. trifida* grows in the middle and upper sections of the State, They probably are similar in properties.

were of undoubted value, but their properties could not be ascertained except by systematic study.

Dr. Summerell confirmed the experience of Dr. Hill as to the therapeutic value of *Rag-weed* as a styptic especially in epistaxis and bleeding gums; but he did not know whether or not this property was due to the presence of tannin.

Dr. Hill's paper was referred to the Committee on Publication.

### REPORT OF A CASE OF ENCYSTED OVARIAN TUMOR.

Dr. A. Holmes, of Clinton, read the report of a case on Ovarian Tumor.

On motion of Dr. O'Hagan it was referred to the Committee on Publication.

### SYPHILIS.

Dr. W. C. McDuffie, of Fayetteville, read a paper on Syphilis.

On motion of Dr. McDonald it was referred to the Committee on Publication.

### PATHOLOGICAL SPECIMENS.

Dr. H. B. Furgerson presented several pathological specimens, which were exhibited and discussed.

Society adjourned until 8 P. M.

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## SECOND DAY—NIGHT SESSION.

### ANNUAL ADDRESS.

Society assembled at 8 o'clock in public session to hear the Annual Address by Dr. W. R. Wilson, of Townesville. There was a good audience composed of ladies and gentlemen, who had been invited to participate in this meeting, according to the custom. The subject of his address was "*The Right Relation of the General Public to State Preventive Medicine.*"

At every meeting of our Society for the past seven or eight years, said the speaker, we have had able reports upon State preventive medicine. Whatever of information was gained, or whatever of interest was excited was confined almost entirely to the medical pro-

fession, who alone heard the discussions or read the reports. He had more readily chosen his subject, because of the recent unfriendly action of the Legislature upon matters touching the very life of our State Board of Health.

The speaker then quoted several eminent writers to the effect, that "no sanitary improvement worth the name will be effected, whatever acts you pass or whatever powers you confer upon public officers, unless you can create a real and intelligent interest in the matter among the people at large." "They must be interested systematically in the general results of sanitary progress and become more intimately acquainted with the social and material causes by which it is impeded."

He showed how greatly the healthy condition of our homes depended upon the women, and that they should be enlightened particularly upon all that concerns the hygienics of the house from the cellar to the garret.

Dr. Wilson defined *Preventive Medicine* to mean a system of measures, the use of which tends to maintain and improve the health of individuals and communities; the addition of the word State carries with it the idea of the proper legislation to carry out these health measures.

So there was much in his subject which was beyond the purview of the doctor. He pointed out that although hygienics in this country was almost entirely in the hands of the doctor, this was only right as pertains to his offices with the sick; really this burden should not fall entirely on the doctor. He was glad to say that "some of the greatest sanitarians that ever lived and toiled for the good of their race were not professional men."

He then made a retrospective glance of sanitary science in the past, and compared it with the present.

The first ray of light upon this dark scene (referring to the devastating epidemics of the middle ages) were the discoveries of Captain Cook and Howard, and then came the great discovery of Dr. Jenner, who had saved more lives and prevented more suffering than curative treatment has in half century of its existence." But it was only within this 19th century that any persistent, systematic study of sanitation has been made, and only within the past 40 or 50 years have reasonings and deductions from well kept records assumed such a shape of proven and acknowledged facts as to acquire

and deserve the name of science ; and it is only within that time that Statesman and political economists have recognized and legalized the relations of the State to Preventive Medicine.

Eminent and competent men now declare and prove, that fully one-third of those who die, die of preventable disease, and that for every death there are twelve cases of lingering, suffering, preventable sickness. If this be so, and I believe it is so, what a sin against humanity. What a sin against Divinity. What an impeachment of the boasted civilization of the 19th century.

Dr. Wilson then reviewed the vital statistics of England and Wales in respect to the "seven zymotic diseases."

In conclusion, the speaker said: "The Legislature of North Carolina has seen fit in its wisdom to cripple the efforts of our State Board of Health, which with rare energy and enthusiasm had been carrying on its work at the sacrifice of time and money upon the part of its members. Our appeal is to you: Let Sanitary Societies be formed in every town in the State ; have frequent meetings; see to it that in your library you have books of recent publication upon those subjects. Read the books, talk about them with your doctor, with your preacher, with your editor, with your neighbor, but especially talk to, and if necessary, *instruct* your member of the Legislature. * * * Tell him that while you want your fertilizers analyzed so that the food you give your land may not be adulterated, that you also want your food, your water, your medicine, analyzed so that the food, the drink, the medicine, you give your wife and children may also be unadulterated. * * * * In a word, my friends, give this great subject that I, in my inexperience have only been able to give you a mere outline, your serious, studious consideration, assured that no subject of greater importance to society, domestic or communal could occupy your time or attention."

At the conclusion of the address, Dr. Satchwell thanked the speaker for his valuable and spirited address, and moved that it be printed.

Dr. Wood thought the speaker had done a great service to the Society, the Board of Health, and the people at large for his manly and vigorous appeal in behalf of State medicine, and that the Board of Health would at once order a large edition of this address, for it should be distributed in every household in the State.

Adjourned to meet Thursday morning at 9 o'clock.

### THIRD DAY—MORNING SESSION.

Society met promptly at 9 o'clock.

Opened with prayer by the Rev. W. J. Smith.

President announced

### COMMITTEE TO SELECT AN ESSAYIST.

Drs. Wm. R. Wood, W. T. Ennett, and J. R. Staton.

During the morning session this committee announced the appointment of Dr. John R. Nicholson, of Richlands, which was confirmed by the Society.

### RESOLUTION OF SYMPATHY FOR DR. HUGH KELLY.

Dr. Satchwell offered the following resolution which was adopted:

WHEREAS, The Society learns with sincere sorrow that our esteemed fellow-member and war-worn veteran in the cause of medical improvement, Dr. Hugh Kelly, of Statesville, lies at home, after a long and arduous service in professional harness; prostrated with physical infirmities and afflictions that disqualify him from practice; therefore

*Resolved*, That in his old age, worn down by professional labors and suffering, we express our high appreciation of his virtues, worth, and labors, as a citizen and physician and our deep sympathies with him and his family, and that the Secretary be requested to forward to him a copy of this preamble and resolution with a letter of condolence in this, his day of sickness and trials.

### FINAL REPORT OF COMMITTEE ON CREDENTIALS.

The Committee on Credentials beg leave to submit their final report. We find the following gentlemen qualified for membership and recommend their election:

Dr. H. T. Bass, Tarborough.

" T. S. Royster, Williamsborough.

" F. C. James, Pitt County.

N. J. PITTMAN,
C. J. O'HAGAN,
W. H. WHITEHEAD, } Committee.

### ARTIFICIAL LIMB.

Dr. J. W. Jones, exhibited an artificial limb (peg) made by Mr. Alfston, of Louisburg.

Dr. John McDonald examined it and pronounced it the best peg for a working man he had ever seen, and recommended it.

### REPORT OF THE COMMITTEE ON NOMINATIONS.

The Committee on Nominations made the following report:

For President:

Dr. A. B. Pierce, Weldon.

Vice-Presidents:

Dr. F. W. Potter, Wilmington.
" Geo. W. Graham, Charlotte.
" R. Dillard, Edenton.
" Geo. W. Long, Graham.

Treasurer:

Dr. A. G. Carr, Durham.

Secretary:

Dr. L. J. Picöt, Littleton.

Orator:

Dr. Julian M. Baker, Tarborough.

### DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Dr. John McDonald, Washington.
" A. W. Knox, Raleigh.
" W. R. Wood, Scotland Neck.
" Wm. T. Cheatham, Henderson.
" J. W. McNeill, Fayetteville.
" S. S. Satchwell, Rocky Point.
" T. S. Burbank, Williamston.
" Thomas Hill, Goldsborough.
" R. F. Lewis, Lumberton.
" D. J. Cain, Asheville.
" W. H. Lilly, Concord.

### DELEGATES TO VIRGINIA MEDICAL ASSOCIATION.

Dr. Geo. A. Foote, Warrenton.
" W. P. Beall, Greensborough.
" John Whitehead, Salisbury.
" Frank Duffy, Newberne.
" I. Wellington Faison, Mt. Olive.
" T C. Powell, Rocky Mount.

DELEGATES TO SOUTH CAROLINA MEDICAL ASSOCIATION.

Dr. S. B. Evans, Statesville.
" Robert Morrison, Shelby.
" S. B. Jones, Charlotte.

COMMITTEE ON PUBLICATION.

Dr. Thomas F. Wood, Wilmington.
" G. G. Thomas, Wilmington.
" L. J. Picöt, Littleton.
" W. T. Ennett, Burgaw.

OBITUARY COMMITTEE.

Dr. F. W. Potter, Wilmington.
" Jas. McKee, Raleigh.
" I. E. Green, Weldon.

BOARD OF CENSORS.

Dr. Chas. J. O'Hagan, Greenville.
" N. J. Pittman, Tarborough.
" J. J. Summerell, Salisbury.

Respectfully submitted,

N. J. PITTMAN,
J. J. SUMMERELL,
W. C. MCDUFFIE,
HENRY W FAISON,
} Committee.

The report was received and adopted.

CHAIRMEN OF SECTIONS.

*Surgery.*—Dr. L. L. Staton, Tarborough.
*Practice of Medicine*—Dr. W. P. Mercer, Toisnot.
*Microscopy and Pathology.*—Dr. John Whitehead, Salisbury.
*Obstetrics and Gynecology.*—Dr. S. B. Jones, Charlotte.
*Materia Medica and Therapeutics.*—Dr. J. T. Strickland, Thomasville.
*Diseases of Children.*—Dr. Kemp P. Battle, Jr., Chapel Hill.

RESIGNATION.

Drs. Bryan and H. Otis Hyatt offered their resignations which were accepted.

### THE NAMES OF LICENTIATES OF THE BOARD OF MEDICAL EXAMINERS TO BE PUBLISHED IN THE COUNTY PAPERS.

Dr. P. E. Hines offered the following resolution, which as amended by Dr. McDonald was adopted:

*Resolved*, That the President and Secretary of the Board of Examiners be authorized to publish the names of the doctors, who have passed an approved examination before the Board of Examiners, in their respective county papers for four weeks. And that the number of the Chapter and Section of the law governing the Board of Examiners be appended to each advertisement.

### ANNUAL ESSAY UNAVOIDABLY OMITTED.

It was announced by Dr. Thomas F. Wood that Dr. Barringer, the Essayist, was taken sick at Goldsborough *en route* for the meeting. As the reading and discussion of his essay must be omitted, he moved that it be referred to the Committee on Publication. Adopted.

### CHAIRMAN OF SECTION ON PRACTICE OF MEDICINE.

Dr. Geo. W. Long, Chairman of Section on Practice of Medicine read his report, which after discussion, was referred to the Committee on Publication.

### RESOLUTION ASKING CONGRESSIONAL APPROPRIATION FOR FIRE PROOF BUILDING FOR ARMY MEDICAL MUSEUM AND LIBRARY OF THE SURGEON-GENERAL'S OFFICE.

WHEREAS, For many years the medical profession of this country have enjoyed the advantages of the Army Medical Museum, and the great National Medical Library known by the modest name of the "Library of the Surgeon-General's Office." We have seen this Library develop into the greatest consulting medical library of the world, giving aid to the medical scholars of this country, advancing the cause of medical learning and thereby increasing the efficiency of the profession, and furthermore giving to American medicine an honorable position abroad.

WHEREAS, This great collection is in unsafe quarters and is in danger of being destroyed by fire, and

*Resolved*, That we request our Representatives in Congress to give their influence to provide proper support for the Army Museum and Library, and help to secure at an early day a fire proof building for their protection and preservation, and that a Committee of three be appointed to communicate the desires of this Society in the premises.

Adopted.

The President appointed Drs. Thomas F. Wood, T. D. Haigh and Chas. Duffy, Jr., as the Committee.

### SECTION ON DISEASES OF CHILDREN.

Dr. A G. Carr read his report as Chairman of the Section on Diseases of Children.

Referred to the Committee on Publication.

### INSTALLATION OF PRESIDENT.

On motion of Dr. Chas. Duffy, Jr., the newly elected President, Dr. A. B. Pierce, was escorted to his seat by Drs. Duffy and O'Hagan. He was introduced by Dr. O'Hagan.

### MORPHINE POISONING.

Dr. P. J. Macon read a paper on Morphine Poisoning. Referred to the Committee on Publication.

### NEW MEMBERS FOR 1884.

The following new members signed the Constitution:

| | |
|---|---|
| Dr. W W Faison, Goldsborough. | Dr. J H Searborough, Trenton. |
| " W O McDowell, Scotland Neck | " N P Bodie, Palmyra. |
| " D R Schenck, Hillsdale. | " G C Edwards, Hookerton. |
| " N H Street, Pollocksville. | " E M Summerell, Salisbury. |
| " J A Stevens, Clinton. | " K M Ferguson, Manchester. |
| " T S Royster, Williamsboro'. | " D B McNeill, Shallotte. |
| " Isaac M Taylor, Chapel Hill. | " H T Bass, Tarborough. |
| " Jas M Hodges, Mt. Olive. | " N M McLean, Shoe Heel. |
| " S H Rogers, Raleigh. | " J H Anderson, Tarborough. |
| " W L Hudson, Hawley's Store | " F C James, Pitt County. |
| " M O Bunn, Wilmington. | " J C Braswell, Whitakers. |
| " Oscar L Gregory, Halifax. | " G L Wimberly, Jr, Tarboro'. |
| " Wm H Bobbitt, Rockingham. | " B L Long, Hamilton. |
| " F R Harriss, Henderson. | " P J Macon, Warrenton. |
| " H H Whitaker, Battleboro'. | " H I Clark, Hamilton. |

Recess.

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### AFTERNOON SESSION—THIRD DAY.

Meeting called to order by Dr. A. B. Pierce, President.

### SECTION OE OBSTETRICS AND GYNÆCOLOGY

Dr. J. M. Hadley's report as the Chairman of the Committee on Obstetrics and Gynæcology having been dislocated from its place in

the programme on the second day, and he being called away during the morning session, it was referred to the Committee on Publication without reading.

### TIME AND PLACE OF NEXT MEETING.

Dr. Lewis put Raleigh in nomination; Dr. Duffy put Newberne in nomination. Raleigh was selected and the third Tuesday in May next, as the time of meeting.

### LOCAL COMMITTEE OF ARRANGEMENTS

Drs. Knox, Lewis and Hines were chosen the Local Committee of Arrangements for the next meeting.

### RESOLUTION OF THANKS.

Dr. H. W. Faison moved that the thanks of this Society be tendered the citizens of the town of Tarborough, and the members of Edgecombe Medical Society for the hospitable manner in which they have entertained this body.

The Society then adjourned to meet in Raleigh on the third Tuesday in May (20th) at time and place arranged by the Local Committee of Arrangements.

J. K. HALL, M.D., President.

L. JULIEN PICÖT, M.D., Secretary.

## REPORT OF THE BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners, met in Tarborough on the 14th day of May and continued in session until the night of the 17th of May. The following applicants passed their examinations successfully:

Dr. D. R. Schenck, Hillsdale, Guilford County, N. C.
" S. H. Rogers, Raleigh.
" H. I. Clark, Hamilton, Martin County.
" B. L. Long, Hamilton, " "
" J. H. Anderson, Tarborough.
" G. L. Wimberly, Tarborough.
" S. T. Johnson, Tarborough.

Dr. H. H. Whitaker, Battleborough.
" F. R. Harriss, Henderson.
" H. B. Marriott, Battleborough.
" J. C. Braswell, Whitakers.
" W. W. Faison, Goldsborough.
" N. H. Street, Pollocksville.
" J. A. Stevens, Clinton.
" W. O. McDowell, Scotland Neck.
" Oscar L. Gregory, Halifax.
" Wm. H. Bobbitt, Rockingham.
" Wm. L. Hudson, Hawley's Store.
" J. H. Scarborough, Trenton.
" P. J. Macon, Warrenton.
" Jas. M. Hodges, Mt. Olive.
" E. G. Moore, Toisnot.
" M. O. Bunn, Wilmington.
" Isaac M. Taylor, Chapel Hill.
" W. N. Smith, Scotland Neck.
" N. P. Bodie, Palmyra.
" D. B. McNeill, Shallotte.
" G. C. Edwards, Hookerton.
" E. M. Summerell, Salisbury.
" K. M. Ferguson, Manchester.
" N. M. McLean, Shoe Heel.

The next meeting of the Board will be held in Raleigh, on Monday before the third Tuesday in May 1884. The following is the order of examinations :

*Anatomy.*—Dr. P. E. Hines.
*Surgery.*—Dr. T. D. Haigh,
*Chemistry.*—Dr. Geo. L. Kirby.
*Materia, Medica.*—Dr. Joseph Graham.
*Obstetrics.*—Dr. Thomas F. Wood.
*Practice of Medicine.*—Dr. H. T. Bahnson.
*Physiology.*—Dr. R. H. Lewis.

RICHARD H. LEWIS, M.D.,
Secretary *pro tem.* Board of Medical Examiners of N. C.

TARBOROUGH, N. C., May 16th 1883.

The North Carolina Board of Health adjourned on the 16th of May, 1883, to meet again upon the call of the President. The next regular meeting will take place in Raleigh on the third Tuesday in May, 1884. M. WHITEHEAD, M.D., President.

THOMAS F. WOOD, M.D., Secretary.

## REVISED ROLL OF MEMBERS IN THE ORDER IN WHICH THEY SIGNED THE CONSTITUTION.

*Those marked * were present last meeting. Marked (D) denotes death.*

Dr. N J Pittmann,* Tarborough.
" J B Jones, Charlotte.
" R B Haywood, Raleigh.
" Jas A McRae, Fayetteville.
" Jas B Dunn, Raleigh.
" Will G Thomas, Wilmington.
" S S Satchwell,* Rocky Point.
" J R Mercer,* Tarborough.
" E B Haywood, Raleigh.
" A R Pierce,* Weldon.
" H W Faison,* Faison's Depot.
" Allman Holmes,* Clinton.
" E A Anderson, Wilmington.
" Hugh Kelly, Staiesville.
" F M Henderson, Concord.
" J J Summerell,* Salisbury.
" P E Hines,* Raleigh.
" M Whitehead, Salisbury.
" J G Ramsay, Rowan Mills.
" R H Winborne, Edenton.
" J K Hall,* Greensborough.
" Geo A Foote,* Warrenton.
" Eugene Grissom, Raleigh.
" R L Payne, Lexington.
" F M Rountree,* Kinston.
" E F Ashe, Wadesborough.
" D B Woods, Rowan Mills.
" Chas J O'Hagan,* Greenville.
" J W Jones,* Wake Forest.
" J F Long, Washington.
" John K Ruffin, Wilson.
" C W Knight,* Tarborough.
" J B Hughes, Newberne.
" J C Gidney, Shelby.
" Wm R Wood,*Scotland Neck.
" J H Hicks,* Faison.
" M T Savage,* Scotland Neck.
Dr. Thomas F Wood,*Wilmington
" Thos C Powell,* Rocky Mount.
" Geo L Kirby,* Goldsborough.
" P A Barrier, Mt Pleasant.
" L A Stith, Wilson.
" J F Shaffner, Salem.
" W T Cheatham, Henderson.
" Elisha Porter, Rocky Point.
" E J Haywood, Raleigh.
" C R Barron, Toisnot.
" B P Alston, Warrenton.
" J R McCorkle, Mooresville.
" G G Smith, Concord.
" D N Patterson, Mangum.
" Joel G King, Warrenton.
" J B Sugg,* Tarborough.
" H T Bahnson, Salem.
" Geo N Ennett, Saunders'Store
" Chas Duffy, Jr,* Newberne.
" W W Lane, Wilmington.
" R L Cowan, Rowan Mills.
" R F Lewis,* Lumberton.
" Jas S Robinson, Elizabeth.
" W J Love, Wilmington.
" J C Walker, (D) Wilmington.
" James McKee, Raleigh.
" L L Alexander, Topsail Sound
" Willis Alston, Littleton.
" W J H Bellamy, Wilmington.
" Geo F Lucas, Point Caswell.
" Walter Brodie, Whitakers.
" A S Jones, Warrenton.
" J L Knight,* Tarborough.
" C S Killebrew,* Tarborough.
" W T Ennett,* Burgaw.
" W I Royster, Raleigh.
" G Gillett Thomas, Wilmington

Dr. V N Seawell, Wallace.
" Geo S Attmore, Newberne.
" S B Flowers, Mt. Olive.
" P W Young, Oxford.
" John McDonald * Washington
" Francis Duffy, Newberne.
" L L Staton,* Tarborough.
" T B Germon, Ridgeway.
" A G Carr,* Durham.
" John A Allison, Statesville.
" J B Gaither, Salisbury.
" J M Hadley,* La Grange.
" W G Johnson, Farmington.
" W J McLinden, Wadesboro'.
" Josh W Vick, Selma
" Isaac E Green, Warrenton.
" P L Murphy, ———— -
" Joseph Graham,* Charlotte.
" J M Miller, Charlotte.
" J L Henderson, Mt. Pleasant.
" J R Wilson, Harris' Depot.
" J F Miller, Goldsborough
" S J Alexander, Randalsburg.
" H K DeArmand, Pineville.
" J P McCombs, Charlotte.
" O P Houston, Mt. Ulla.
" S J Gilmer, Concord.
" John Fink, Concord.
" W H Lilly, Concord.
" Thos J Moore,*Richmond, Va.
" E S Foster. Louisburg.
" A A Hill, Lexington.
" J H Baker,* Tarborough.
" J B Hall, Scotland Neck.
" J M Richardson, Lincolnton.
" T D Haigh,* Fayetteville.
" L J Picot,* Littleton.
" David N Sills,* Castalia.
" John A Drake, Battleborough
" W C Murphy*S'h Washingt'n
" W J Cooke, Louisburg.
" E J Thorpe,* Rocky Mount.
" D W Bulluck,* Whitaker's.
" W H Whitehead,* Battleboro'
" C W Eagles,* Sparta.
" R A Sills,* Nashville.
" R H Speight,* Tarborough.
" C E Moore, Battleborough.
" H G Land Poplar Branch.
" R J Grimes, Robersonville.
" W C McDuffie,* Fayetteville.
" B W Robinson, Fayetteville.
" P S Peteway, Enfield.
" Henry Tull, Kinston.
" A V Budd, Egypt.
" R R Robeson, Kyles' Landing
" W A Murdock, Mt. Ulla.
" Jas W McNeill, Fayetteville.
" J D McMillan, Lumberton.

Dr. W H McKinnon, Fayetteville.
" Jos Hollingsworth, Mt Airy.
" Robt W Glenn, Greensborough
" Beverly Jones, Forsythe Co.
" Nat S Henderson, Pelham.
" Jeff Scales, Staten Island, N.Y
" Geo W Long,* Graham.
" Richard H. Lewis,* Raleigh.
" Geo W Graham, Charlotte.
" Preston Roan, (D) Winston.
" J D Roberts, Goldsborough.
" L H Hill, Germantown.
" W W Wilhelm, Mooresville.
" W R Wilson,* Townesville.
" E Nelson Booker, Leachburg.
" N S Siewers, Salem.
" L G Hunt, Huntsville.
" Jas E Griffith, Clemmonsville.
" W P Mallett, Chapel Hill.
" H M Alford, Greensborough.
" F W Potter,* Wilmington.
" J F Harrell, Whiteville.
" W P Exum,* Wayne County.
" D Stuart Lyon, High Point.
" A M Lee, Clinton.
" J R McClelland,* Mooresville.
" Richard J Noble, Selma.
" Wm H H Cobb, Goldsborough
" J i Tucker, Henderson.
" C G Bryant, Rich Square.
" E H Hornaday,*WillowGreen
" Paul B Barringer, Charlotte.
" I Wellington Faison,*Mt Olive
" John A Pollock, Kinston.
" A W Knox,* Raleigh.
" John W Smith, Reidsville.
" C C Peacock, Wilson.
" D A Cheek, Greensborough.
" J A McLean, McLeansville.
" J G Ector, Friendship.
" Hubert Haywood, Raleigh.
" J M Covington, Rockingham.
" W R Hollingsworth, Mt Airy.
" O P Robinson, Arkansas.
" C E Bradsher, Hurdle's Mills.
" R W Thomas, Thomasville.
" S W Stevenson, Mooresville.
" H T Trantham, Salisbury.
" W P Beall, Greensborough.
" W A Coble, Brick Church.
" A D McDonald, Wilminglon.
" S R Jones, Charlotte.
" C M Glenn, Greensborough.
" Joseph J Cox, New Garden.
" D M Prince, Laurel Hill.
" J A Sexton, Raleigh.
" S B Evans, Statesville,
" N McJohnston, Durham.
" J T Sledge,* Greenville.

Dr. R H Hargrove,* Robersonville
" J T Winston, Youngsville.
" C A Swindell, Greenville.
" W L Abernethy, Hickory.
" John Chapel Walton, ——
" J M Tomlinson, Bush Hill.
" Julian M Baker,* Tarborough.
" T E Balsley, Greensborough.
" J L Gunn, Yanceyville.
" Thos E Anderson, Statesville.
" Richard Dillard, Jr,*Edenton.
" V St Clair McNider, Jackson.
" L M Powers,* Plymouth.
" W C Galloway,* Snow Hill.
" K J Powers,Camera,Pender co
" J McQ Stansill, Rockingham.
" J T Schonwald, Wilmington.
" R H Adams, Gastonia.
" L W Hunter,* Charlotte.
" W W K Anders,* Gravel Hill.
" M W Hill, Statesville.
" E T Speed,* Tarborough
" L Hussey, Warsaw.
" W P Mercer,* Toisnot.
" H S Norcom, Wilmington.
" Ed De La R King, Goldsboro'.
" S J Montague, Winston.
" J L Nicholson,* Richlands.
" John Whitehead,* Salisbury.
" T W Harris, Chapel Hill.
" H T Ivy, Fayetteville.
" A B Huntley, Wadesborough.
" D B Frontis, Lexington.
" J A Collins,* Enfield.
" C M Pool,* Salisbury.
" John Irwin, Villa Franca.
" Geo H West, Newton.
" G E Matthews,* Ringwood.
" T S Burbank,* Williamston.
" Thomas Hill,* Goldsborough.
" J C Shepard, Scott's Hill,
" R A Hauser, Bethania.
" B F Whiteside, Hickory.
" Percy T Norcop, Asheville.
" S P Waldo, Cary.
" Wm L Crump, South River.
" D J Cain, Asheville.
" M D Phillips, Dalton.
" John G Hardy, Asheville.
" J M Lyle, Franklin.
" J A Reagan, Weaverville.
" R S Baynes, Bushy Fork.
" F Broyles, Asheville.
" T R Robertson, Neuse.
" H W Lilly, Fayetteville.
" G W Fletcher Shufordville.
" S H Lyle, Franklin.
" J Anderson, Calahan.
" E Crowell, Lincolnton.

Dr. R J Wilson, Swannanoa.
" M H Fletcher, Shufordville.
" Thos M Jordan,* Hillsborough
" W L Hilliard, Asheville.
" C Winston, Franklinton.
" T A Crowell, Monroe.
" R L Payne, Jr, Lexington.
" T F Meisenheimer, Big Lick.
" W C Brownson, Asheville.
" T F Pharr, Concord.
" H W Betts, (D) Albemarle.
" W D Hilliard, Asheville.
" J W Moose, Mt. Pleasant.
" A D Pair, Eagle Rock.
" J K Gilkey, Marion.
" J H Faison, Faison.
" W L Reagan, Ivy.
" H B Weaver, Weaverville.
" J C Craigmiles, Marshall.
" A J Battle,* Earpsborough.
" J R Staton,* Tarborough.
" R S Lacky, Amity Hill.
" John H Williams, Asheville.
" C W Woolen, Randlemann's.
" W A Woolen, Randlemann's.
" J R Irwin,* Alexandriana.
" A R Wilson, Greensborough.
" K P Battle, Jr, Chapel Hill.
" Henry B Ferguson,* Halifax.
" J T Strickland,* Thomasville.
" J B Gunter,* Durham.
" Geo S Lloyd,* Tarborough.
" R S Young, Matthews.
" Wm G Bradshaw, Lexington.
" Geo A Smith, Princeton.
" C A Meisenheimer, Mt Pleasant
" M C Hunter,* Huntersville.
" W P Whittington, Burnsville.
" C F Anderson, Mocksville.
" J J Clingman, Huutsvitle.
" W W Faison, Goldsborough.
" W O McDowell, Scotland Neck
" D R Schenck, Hillsdale.
" N H Street, Pollocksville.
" J A Stevens, Clinton.
" T S Royster, Williamsboro'.
" Isaac M Taylor, Chapel Hill.
" Jas M Hodges, Mt Olive.
" S H Rogers, Raleigh.
" W L Hudson, Hawley's Store
" M O Bunn, Wilmington.
" Oscar L Gregory, Halifax.
" Wm H Bobbitt, Rockingham.
" F R Harriss, Henderson.
" H H Whitaker, Battleboro'.
" J H Scarborough, Trenton.
" N P Bodie, Palmyra.
" G C Edwards, Hookerton.
" E M Summerell, Salisbury.

Dr. K M Ferguson, Manchester.
" D B McNeill, Shallotte.
" H T Bass, Tarborough.
" N M McLean, Shoe Heel.
" J H Anderson, Tarborough.
" F C James, Pitt County.
Dr. J C Braswell, Whitakers.
" G L Wimberly, Jr, Tarboro'.
" B L Long, Hamilton.
" P J Macon, Warrenton.
" H I Clark, Hamilton.

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HONORARY MEMBERS.

Dr. W T Howard, Baltimore, Md.
" O F Manson, Richmond, Va.
" R Dillard,* Edenton, N C.
" F D Lente, Cold Springs, N.Y
Dr Jno H Hill, Goldsborough, N.C.
Prof Lewis A Sayre, M.D, N York
Dr John D Bellamy, Wilmington.

# ARTERIO-VENOUS ANEURISM OF THE POSTERIOR AURICULAR ARTERY.

Read before the Medical Society of North Carolina at Tarborough, N. C., May 16th, 1883.

By Frank Duffy, M.D., Newberne.

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Mary Fulcher, colored, æt. about 30 years, is the subject of an arterio-venous aneurism in the region of the left ear. She first consulted us on account of this trouble about six or seven years ago. The situation of the posterior auricular artery, immediately behind the ear, presented an irregular, tortuous tumor, about the size of a turkey egg, the appearance of which is tolerably well shown in its anterior and posterior aspects by the accompanying ferrotypes. The mass pulsated clearly and was pronounced aneurism of the posterior auricular artery.

The patient said she first observed the swelling about five or six years before consulting us. About two years before she sustained an injury to the region of the subsequent aneurism by falling against the edge of a door. That accident is believed to be the cause of the aneurism. She has been married about twelve years and during that time has bourne six children. This fact is noted as the conditions of the blood-vessels incident to pregnancy and the increased strain upon them at the time of labor, likely, has some pathological connection with the development of the aneurism. The woman is tall and robust; has been accustomed to do housework and to work in the fields. When we first saw this woman and sent her to the artist, we proposed to do some operation for the cure of the aneurism and instructed her to prepare for it and return soon—that she failed to do and we lost sight of her during several years. At last, seeing her by accident, the tumor was again examined and found to have very much increased in extent and size. Both the arteries and veins of the region were enlarged and tortuous. Behind the pinna and under the integument of its posterior surface was a large pulsating cavity. In front of the tragus was another cavity not so large. This, corresponding to the situation of the temporal artery. The most of the surface of the pinna was distended and pulsating. The fossa of the helix presented a distension into which the finger might have

passed. The external jugular vein was two or two and a half inches in circumference. The woman was informed that it was only a question of time when the tumor would rupture and was instructed to catch and hold the rent, in case of emergency until surgical assistance could be obtained.

On the second day of July, 1882, the place pained very much and the next night the tumor bursted. The woman roused her sleeping husband by screaming out that she was bleeding to death, which indeed, was rapidly occurring. The man soon seized the bleeding point and stayed the flow. This was kept up, one person relieving another, until next morning when we (C. and F. Duffy) visited her. We found that she had lost very much blood but still had enough left to serve the purposes of life, provided we could prevent further loss.

The common carotid was tied very low down for fear that the upper portion of the artery was diseased and would not become occluded by the ligature. The ligature was not tightened until the artery was known to pulsate between it and the finger. While doing the operation I cut a vein close to the trunk of the jugular vein from which a fearful hæmorrhage started, but was soon arrested by ligation, taking up barely enough to serve the purpose. The sac of the aneurism was now relieved from pressure and freed of dressings where blood was found to flow freely through the rent in the sac although the artery was tied. A harelip pin was then passed deeply through the edges of the opening and the rent brought together with a figure 8 suture which stopped the flow. Pieces of lint moistened in Monsels solution were laid over the part and packing adjusted to the outer surface of the mass, then a firm compress bandage carried over it and around the head. All bleeding was for the time completely arrested, and the woman put to bed and instructed to keep as quiet as possible and on no account to raise her head. The ligation of the carotid did not completely stop the pulsation in the aneurism though it was rendered very feeble. After a few days the bandage was removed, and the pieces of lint carefully soaked off with hot water. The skin was ulcerated in several spots and seemed likely to perforate the cavity. The compression was discontinued and the ulcers dressed with weak carbolic lotion, sometimes with balsam Peru. Notwithstanding the hot weather the little sloughs separated without quite opening the cavity and soon the holes began to fill up

and to skin over. Such a result could scarcely have occurred under the circumstances but for the healthfulness of the subject and the extreme vascularity of the parts. After a few weeks the blood broke through again at a new point where the wall was very thin. Again the bystanders caught the bleeding point and applied some solution of persulphate of iron. This time not having so much trouble in stopping the flow. The place was not disturbed for several days, then the dressings were removed without causing hæmorrhage. It was now evident that something more had to be done to save the woman's life, and the question was, what?

I have omitted to state in the proper order that the small ligature came away from the vein on the ninth day, leaving it occluded, and the ligature on the carotid came away on the twenty-second day with like result.

The wound made in ligating the artery, healed well without any unusual result. After all this, still the tumor pulsated, and the blood broke through a second time.

We were very undecided as to what course to take. At first we thought of laying open the sac freely and tying the vessels that fed the part, stopping some of them with the actual cautery, if necessary; but that would have left a large suppurating cavity in a dangerous locality. To inject with styptics was dangerous.

Bryant reports a case in which death occurred in a few minutes from a clot which floated out into the general circulation and caused embolism of the brain. To avoid such a result we took small pieces of dry compressed sponge and closely packed the surface all around the tumor and secured these with a cloth bandage. Over this we wound around the head and under the jaws, 5 yards of garter elastic drawing it tight. These appliances were arranged so as to leave the centre of the tumor exposed. We then injected a hypodermic syringe full of persulphate of iron solution in the sac, making two punctures. We held the points of puncture until the blood stopped there being a strong tendency to the escape of the fluid injected. The patient bore the elastic bandage about two hours when it was removed leaving the sponges which were moistened under the cloth bandage, by these a gentler compression was kept up several days.

There was no inconvenience from the injection further than a little sloughing at the point of puncture which had the appearance of dry gangrene. The tumor was very nearly completely consolidated

and soon began to shrink. After the throwing off of the slough the holes were slow in filling up, but there was no more hemorrhage and now the parts are completely healed over and of almost natural appearance.

The whole of the old tumor is not quite obliterated. There is still a small fluid portion with a little pulsation, which will require another operation for its complete cure.

After ligation of the common carotid there was considerable cerebral disturbance seeming to threaten necrosis of the brain. For a long time she complained of pain in the head and of giddiness.

She was then sleepless at night and melancholy when the prospect of recovery might have cheered her. She was put upon a course of generous diet with iron tonics and advised to busy herself with some light occupation and is now about in her normal condition.

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## ANNUAL ADDRESS.

Delivered Before the Medical Society of North Carolina at Tarborough, N. C., May 16th, 1883.

By W. R. Wilson, M.D., Townesville, N. C.

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*Mr. President, Ladies and Gentlemen:*

At every meeting of our Society for the past seven or eight years, we have had able and interesting discussions, essays, and reports upon State Preventive Medicine. Whatever of information was gained or whatever of interest was excited was confined almost entirely to the medical profession, who alone heard the discussions or read the reports. Distrustful of my powers, yet animated by a sincere desire to do what little I can, nay, to do as much as I can, to advance this great cause of our own State, I have chosen as the subject of my address, to-night "The Right Relation of the General Public to State Preventive Medicine," and I am the more readily induced to take this subject because of the recent unfriendly action of the State Legislature upon matters touching the very life of our State Board of Health.

No real progress in sanitary reform can be hoped for without the intelligent coöperation of the people. Says Lord Derby: "No sanitary improvement worth the name will be effected whatever acts you pass or whatever powers you confer upon public officers, unless you can create a real and intelligent interest in the matter among the people at large." Says George Wilson in handbook of Hygiene: "The time has gone by when people can be dragooned into cleanliness or be made virtuous by police regulations and hence it is that the most thoughtful among practical reformers of the present day base their hopes of sanitary progress on the education of the masses as the real ground work of national health. The people must be taught that good conduct, personal cleanliness, and the avoidance of excesses are the first principles of health preservation, that mental and physical training must go hand in hand in the rearing and guidance of youth. They must be interested systematically in the general results of sanitary progress and become more intimately acquainted with the social and material causes by which it is impeded."

Says Dr. B. W. Richardson in his address on the Future of Sanitary Science in 1877, "I want strongly to enforce that it is upon the women on whom full sanitary light requires first to fall. Health in the home is health everywhere; elsewhere it has no abiding place, I have been brought by experience to the conclusion that the whole future progress of the sanitary movement rests for permanent and executive support on the women of the country. When, as a physician, I enter a house where there is a contagious disease, I am, of course, primarily impressed by the type of the disease, by the age, strength and condition of the sick person. From the observations made on these points I form a judgment of the probable course and termination of the disease and at one time I thought such observations sufficient—now I know them to be but partly sufficient. A glance at the appointments and arrangement and management of the house is now necessary to make perfect the judgment. By this glance is detected what aid the physician may expect in keeping the sick in condition most favorable for escape from death and by this is also detected what are the chances that the affection will be confined to one sufferer or be distributed to many.

"As a rule to which there are the fewest exceptions, the character of the judgment is hereupon dependent on the character of the presiding genius of the house, on the woman who rules over that small domain.

The men of the house come and go, knows little of the ins and outs of anything domestic, are guided by what they are told and are practically of no assistance whatever. The women are conversant with every nook of the dwelling, from basement to roof, and on their knowledge, wisdom and skill the physician rests his hopes. How important then, how vital that they shall learn as a part of their earliest duties the choicest sanitary code."

By Preventive Medicine we mean a system of measures, the use of which tends to maintain and improve the health of individuals and communities, the addition of the word State carries with it the idea of the proper legislation to carry out those health measures. Thus by this simple definition you will see at once that there is much in our subject beyond the purview of the doctor. Generally in our country everything pertaining to health or sickness is left entirely in the hands of the medical profession and in the presence of actual disease this is right and proper and the physician should require absolute and implicit obedience to his prescriptions but in Preventive Medicine as above defined, while he may advise, nay, may lead, yet after all the people by a study of the laws of health, and by taking precautions and means to carry out those laws must be their own saviours from preventable disease and premature death, and right here, I am glad to say, that some of the greatest sanitarians that ever lived and toiled for the good of their race were not professional men.

Captain Cook, the renowned navigator, while seeking fame in geographical discoveries made himself not famous in the sense in which we generally use that word, but a *blessing* to mankind by his discovery that scurvy could not only be cured but prevented by vegetable food, so that dread disease which killed more English seamen than "tempest or battle" has really been banished from our list of diseases and only now, at rare intervals, reäppears as the result of gross ignorance or carelessness. In the same century, the good and philanthropic Howard, when misfortune had as much agency as crime in filling English prisons proved the genesis of typhus fever to be in the poisoned and poisonous air and accumulated filth of those cells, a discovery which enabled Mr. Chadwick to say a year or two ago in speaking of the triumphs of Preventive Medicine "that in prisons and places under effective sanitary control the death-rates (from disease) have been reduced among persons of school ages and

upwards to about 3 in 1000," that is, that in London, which has a good sanitary record, among the institutions subject to absolute hygienic control, the death rate is about 1-7th of what obtains among those who inhabit their own castles and work their own sweet wills. In our own country, in 1850, Lemuel Shattuck, of Boston, was the author of a report on Sanitation, which, though little heeded at the time, yet bore fruit twenty years after in the establishment of the Massachusetts State Board of Health, the first organized effort in this direction in the United States.

Sanitary science is not a thing of to-day. Let us take a brief retrospective glance at its workings in the past. Then let us look at its present status with its aims and ambitions for the future and then let us honestly inquire what relation as good citizens and as philanthropists, we sustain to this great cause.

In the history and traditions of ancient peoples we find traces more or less of its influences. In all times the study of the causation of disease must have suggested to the mind of the student the removal or avoidance of those causes. Some work was done in this direction centuries ago, especially among those three great nations of antiquity the Jews, the Greeks and the Romans, who in turn have impressed their peculiar civilization upon the world. Under the Theocracy the laws pertaining to the religious life of the Jew were paramount, subservient to these laws were, all his civil and domestic relation, hence the countless purifications, washings and baptizings which, while symbolizing the purity which should characterize his religion, yet, also secured the cleanliness of his person, his raiment and his abode. By their isolation from other peoples the first great quarantine law and by the environments of the ceremonial law, by the education, physical as well as moral, forced upon them by the daily, nay hourly requirements of that law, racial development made them a distinct, peculiar people and their acquired heredity gives at this day, even after the lapse of centuries "an illustration of health and vigor, of longevity, of general freedom from disease, and destructive plagues, and great powers of reproduction under adverse circumstances."—T. C. Clark, Report of Rhode Island State Board of Health.

The Greeks and the Romans have left indubitable evidences in history and tradition and in the remains of their cities and dwellings of the value they placed upon sanitary surroundings but their care

in this respect is chiefly noticeable in the great interest taken in physical culture and in at least one of the Grecian States the doctrine of the "Survival of the Fittest" was proclaimed not by "Natural Selection" but by the unnatural devotion of the lame, the blind, the physically weak to premature death.

From the fall of the Roman Empire on through the Middle Ages is but a dreary and sickening record of disastrous and oft recurring epidemics, claiming their victims by the tens and hundred of thousands potent factors in the fall and extinction of nationalities and dynasties.

The age of chivalry was also the age of superstition and ignorance and dirt. To the Monk was relegated the care of bodies as well as of souls, and "while the preacher of Righteousness he was also an illustration of personal filth." During all these centuries of devastating diseases there was no recognition of removable or avoidable physical causes, but an apathetic, superstitious submission to them as of Divine appointment, an horrible imputation upon that Good Being who rejoices neither in the death of the body or the souls of the creatures of His hand.

The first rays of light upon this dark scene were the discoveries of Cook and Howard already alluded to and then came the great Dr. Jenner, who, by the discovery of vaccination, has saved more lives, and prevented more suffering, than curative treatment has in any half century of its existence.

But it has only been within this nineteenth century that any persistent, systematic study of sanitation has been made and only within the past 40 or 50 years have reasonings and deductions from well kept records assumed such a shape of proven and acknowledged facts as to acquire and deserve the name of Science, and it is only within that time that statesmen and political economists have recognized and legalized the relations of the State to Preventive Medicine. Eminent and competent men now declare and prove that fully one-third of those who die, die of preventable disease and that for every death there are twelve cases of lingering, suffering, preventable sickness.

If this be so, and I believe it is so, what a sin against humanity; what a sin against Divinity; what an impeachment of the boasted civilization of the nineteenth century. But as intimated a brighter day has dawned. Governments, statesmen, and political economists

are beginning to appreciate and act upon the results of the labors of physicians and sanitarians. They have had forced upon them the fact that a great proportion of the sickness afflicting any country is preventable. They see that the same line of argument which forces State interference in the punishment of crime in forcing the observance of civil contracts in the matter of education, in providing and overseeing great lines of transportation also urge State interference in the transgression of sanitary law. It is true, that the ground work of true sanitation is in the homes of the people. That upon the proper domestic regulations of each household in regard to those great essentials of good health, viz: pure air, pure water, good food and a plenty of each with cleanliness of person and household depends the health of the family, of the community, of the State, for a community or a State is but an aggregation of such homes. To secure this great good, certain sanitary laws must be complied with else sure penalty will come in shape of disease and death and unhappily not confined to the original transgressor. But what laws are not violated?

The violations of the criminal law erects the gibbet, the guillotine and the penitentiary. The violations of the civil law consumes the life time of legislatures in imposing and of judges in executing penalties. The State must interfere and interpose these checks.

So in the violation of the laws of health the individual cannot protect himself or his family against those causes of disease set in motion by the ignorance or neglect, or carelessness of his neighbor. As an instance take small-pox. If anything ever has been proven, the fact that true vaccination protects against small-pox must be admitted, yet only last year, when that disease was declared epidemic in our capital city, Dr. Knox tells us that over three thousand people in the capital of our State, refused to be vaccinated thus in their ignorance and recklessness not only rejecting protection for themselves but in hourly danger of becoming the means of spreading the disease among others.

But what is the present status of Preventive Medicine? Happily for us a great government has nobly identified herself with the grand cause. In England sanitary laws are among those best executed in the land. Other European countries have fallen into line and the health department of the different governments takes its proper rank and in our own country twenty-seven States have Boards of Health.

Some of these Boards by aid of appreciative Legislatures are doing noble work, others, I am sorry to say, ours among them, in their annual reports have chiefly to tell of work they want to do and of the whiteness of the harvest with paucity of laborers and means. But as before said, it is under English auspices and upon English homes that State Preventive Medicine sheds its richest blessing.

As instances of its beneficent action and as triumphs of the execution of its precepts, we can to-day say that scurvy, leprosy and the plague have ceased their scourges, that vaccination has added three years to the expectancy of human life, and that Asiatic cholera, that dread traveller, upon all highways of commerce leading from the East to the West, almost invariably yields to preventive measures in its formative stage, but as a clearer demonstration of the value of preventive measures, I here quote Edwin Chadwick, the veteran sanitarian of England in his Health Report for 1880. Says he: "Before concluding the part of our report which relates to sanitary administration, it may be useful to draw attention to the annual death-rate for some years past, as indicating the effect which recent sanitary measures would appear to have had upon the public health.

The following table shows the death-rate for each of the four last decennial periods:

ENGLAND AND WALES.

| ANNUAL DEATH-RATE PER 1000. | 1841–50. | 1851–60. | 1861–70. | 1871–80. |
|---|---|---|---|---|
| All Causes..... | 22.4 | 22.2 | 22.5 | 21.5 |
| Seven Zymotic Diseases..... | ..... | 4.11 | 4.14 | 3.36 |
| Fever..... | ..... | 0.91 | 0.88 | 0.49 |

" 'From the above figures it will be seen that, speaking generally, the death-rate of the country remained stationary from 1840 to 1870, but that in the period 1871-1880 it fell from 22.5 (of the previous decade) to 21.5, a reduction equivalent to nearly 4½ per cent. It may therefore, be roughly estimated that about a quarter of a million of persons were saved from death in the ten years 1871–80, who would have died if the death-rate had been the same as in the previous thirty years. If twelve cases of serious but non-fatal illness be reckoned for every death, it follows that about 3,000,000 persons, or over one-ninth of the whole population, have been saved from a

sick-bed by some influences at work in the past decade, which had not been in operation previously. The case, indeed, is still stronger than this. The death-rate of rural districts is habitually lower than that of urban districts; and as the population is steadily concentrating itself, more and more, into the towns, the death-rate of the whole country would tend to increase, if the other circumstances affecting it remained counteracted, it becomes interesting to see where the gain has been, and to endeavor to trace some of the causes to which it may be due.

" ' Comparing, then, 1861–70 with 1871–80, it will be seen from the foregoing figures that of the entire reduction of 1.0 in the death-rate, more than three-quarters (4.14—3.36=0.78) comes under the head of 'The Seven Zymotic Diseases;' of the diseases, that is, which are most influenced by sanitary improvements, and most amenable to control by the action of sanitary authorities. And of this three-quarters, just half (0.88—0.49=0.39), or three-eights of the entire reduction, is in 'Fever'—the disease which, more than any other, shows itself in connection with such faults of drainage, of water-supply, and of filth accumulation, as it is within the province of good sanitary administration to remove.

" ' It is particularly significant that, since the year 1870, when the fever death-rate was 0.80 per 1000, it has fallen pretty steadily, year by year, as follows, down to 0.33 in 1880:

| | |
|---|---|
| 1871 | .70 |
| 1872 | .61 |
| 1873 | .58 |
| 1874 | .59 |
| 1875 | .55 |
| 1876 | .44 |
| 1877 | .41 |
| 1878 | .42 |
| 1879 | .30 |
| 1880 | .32 |

" ' Thus in the five years, 1871–5, the fever death-rate was 0.61; in the five years 1876–80, it was 0.38.' "

" During the decade from 1861 to 1870, there appeared to be no gain from the outlay on sanitary works or on sanitary service in England and Wales; but since then the service appears to have made an effective start, and the pecuniary gain may be thus stated:

Under the inquiry as to interments, the cost of funerals—all round—was ascertained to be £5 each. The gain under that head will, therefore, be about one million by the quarter of a million of funerals saved during the last decade. The direct cost of sickness has been estimated at about £1 per case. The gain under that head will, therefore, amount to about three millions; a gain, that is to say, of medical treatment and other expenses. But the gain to the wage classes, from the saving of the lost labor, will have been far greater. Dr. James Watts, who has had great experience in friendly societies, states the average loss of working-time at two working weeks and a half per member between twenty-one and seventy years of age, and he estimates the total loss to the wage classes, by the loss of work through sickness, at upwards of thirteen millions per annum. The gain derivable from sanitation may be further illustrated from its advance in military service. The first British army went out to the Crimea under the established curative or medical service, and it was lost. Sanitary Commissioners, trained in service under the first General Board of Health, were then sent out to reform the condition of hospitals and camp, and within three months reduced the sickness and mortality from a plague-rate down to an ordinary standard of health, and by the end of the summer of 1855, to a rate lower than that of the best hospital at home; and the War Minister declared in Parliament that by the application of their science the second army has been saved. Since then, the Army Medical Department has applied extended sanitary operations. Their exercise under great difficulties is best shown in India. Formerly the death-rate in the Indian Army was 69 per 1000 per annum. The average mortality from 1869 to 1878 was only 20.41. There was, therefore, a gain of 48.59 per 1000; or, on the present force out there, a gain of 2350 men. The death-rate of the army at home was formerly 18 per 1000. In the year 1879 it was 7.55, being a gain of 10.55 per 1000. As the strength of the army in 1879 was 80,700, the gain was 843 per annum. The total gain to the army in India, and the army at home, and the rest of the army, will be 3443 men per annum. As each soldier is estimated at £100, this represents in money value £344,000, or more than a third of a million. It is not very easy to get at the real amount of sickness, but the total gain, including the diminished death-rate, is considered to be under-rated at half a million per annum. For the decade, the total saving of military force

from death have been upwards of forty thousand men, and upwards of eight millions and a quarter in money.

"The total number of men killed on the battle-field and on the deck, including those killed at Waterloo, Trafalgar, and the most severe battles during the twenty-two years' war was, according to the army returns, 19,796. The lives saved from premature destruction by the civil sanitary service, during each of the ten years of the decade, was 25,000. The wounded during the twenty-two years' war were 79,709; but, taking a serious sickness as equivalent to a wound, the achivement of the sanitary service has been, during the same period, some three millions of cases saved by the civil sanitary service. A reduction of the death-rate by 4½ per cent. is only an instalment of sanitary progress. Thus, in the instance of Croyden, visited by the delegates of the Congress, the death-rate has been reduced from 25 to 16 per 1000 by supplies of pure water carried into the houses, and the foul water carried off at once out of the houses and out of the town by "Local Board Authority." So in Salisbury, Leamington, and a number of other places.

"In London, the death-rates among the wage class in their common dwellings is upwards of 30 per 1,000 which in model dwellings it is about 16 or 17 per 1000 with surrounding deteriorating conditions."

I have tried to prove to you that a large proportion of the sickness and death of our country is preventable. I have quoted in your hearing from the works of the best sanitarians of the age in which we live, facts and figures which not only go to prove the wholesome influence of Preventive Medicine, but also the terrible necessity there is for it.

Now, what will you do with it? The doctor, while a teacher, is chiefly concerned in the cure or palliation of disease actually existing, but with you and upon you, the people, the people of North Carolina, as well as of every other sovereignty upon earth rests the responsibility and also the ability in great measure to avoid this great waste of health and life.

The Legislature of North Carolina has seen fit in its wisdom to cripple the efforts of our State Board of Health which with rare energy and enthusiasm had been carrying on its work at the sacrifice of time and money upon the part of its members. Our appeal is to you: Let sanitary societies be formed in every town in the State;

have frequent meetings, see to it that in your library you have books of recent publication upon those subjects. Read the books, talk about them with your doctor, with your preacher, with your editor, with your neighbor, but especially talk to, and if necessary instruct your member of the Legislature. Let him see that you are interested on this subject, let him see that if disease and suffering can be prevented by State action then you want it. Tell him that while you want your fertilizers analyzed so that the food you give your land may not be adulterated, that you also want your food, your water, your medicine analyzed, so that the food, the drink, the medicine you give your wife and children may also be unadulterated. Thank him that he has provided educational facilities for your children, even if in small quantity and bad quality, but tell him also you would be more obliged if he would provide somewhat for the hygienic wants of your children at school, some few requirements as to the healthfulness of the site of the schoolhouse, some little regard to the water supply, to the ventilation of the house. Suggest that some regard should b paid to the relation between the number of pupils and the capacity of the house. Tell him to look after the lighting of the house so your child in seeking knowledge may not give an eye for it ; also plead with him that proper precaution may be made with regard to infectious dlseases, that the certificate of the family physician be required before the reädmittance of a scholar after an attack of a contagious diseases.

Tell your member thaf you have heard of color-blindness, and that it is reported that it is dangerous for men so afflicted to be employed on railroads and steamboats and ask his interference.

In a word, my friends, give this great subject that I, in my inexperience, have only been able to give you a mere outline, your serious, studious consideration, assured that no subject of greater importance to society, domestic or communal, could occupy your time or attention.

In conclusion, I wish to acknowledge my indebtedness to the Secretary of the Boards of Health of Rhode Island, Massachusetts, New Jersey, Michigan, and to Dr. Cabell, of the Universlty of Virginia and to say that having fully availed myself of the results of their labors, I can, without egotism, earnestly commend to you, not the mode of expression but the ideas themselves.

# SUCCESSFUL REMOVAL AND RECOVERY OF A MULTI-LOCULAR, ENCYSTED, OVARIAN TUMOR.

Read before the Medical Society of North Carolina at Tarborough, N. C., May 16th, 1883.

By A. Holmes, M.D., Clinton, N. C.

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Mrs. B., wife of S. B., of Sampson County, N. C., about 33 years of age, and the mother of five children—a short history of her case may not be uninteresting and I give it as related to me at the time she applied for assistance.

On the 24th of February, 1882, she gave birth to a child, and that very soon after her confinement she enlarged rapidly until a severe attack of dysentery, which continued two weeks and reduced the size of abdomen almost to its normal condition. July following she first discovered a hard, movable body, below and to the right of the umbilicus.

October following she consulted her physician, Dr. J. H. Benton, of Newton Grove, Sampson county. She was brought to me a distance of 14 miles in November last, presenting the appearance of a woman in an advanced stage of utero-gestation, with a large floating or movable mass on the right side of umbilicus, reaching several inches above and below, fluctuating freely. The uterine sound was passed without trouble into the cavity of womb for two and a half inches, revealing no intra-uterine disease,

I informed Mrs. B. that, in my opinion, this was a case of encysted ovarian tumor and that an operation could alone relieve her.

She was brought to me again the latter part of November. On 31st of December, assisted by Dr. J. H. Faison, of Clinton, I introduced a trocar and drew off 12 quarts of a yellowish looking fluid. Drew off again, 28th January, 30 pints, and on 22d of February (on which day I expected to operate; but failed to secure necessary assistance) drew off 19 pints of similar liquid.

On 25th February, assisted by Dr. J. H. Benton, (to whom I am indebted for most valuable aid, I fully impressed Mrs. B., and husband with the imminent danger attending this truly formidable operation, the possibility of immediate death, and the liability of tumors of such a character after removal to return sooner or later)

she insisted that I should give her the benefit of an operation. The patient was placed upon a narrow, stout table, covered with blankets and quilts, over these a rubber cloth, shoulders and head supported by pillows, and as a preliminary step, about one ounce of spirits given.

A five per cent. solution of carbolic acid was prepared, a shallow dish filled with this solution, and every instrument to be used carefully wiped and placed in this dish. Large bowls were filled with this antiseptic solution for sponges and cloths for the occasion; silk ligatures and sutures carbolized, in fact with the exception of *spray*, as near Lister's mode of procedure as possible.

The patient thoroughly anesthetized with equal parts of chloroform and ether at the suggestion of my friend, Dr. Benton, (for I will state here that I always prefer chloroform, if pure, such as furnished by Squibb, of Brooklyn, as in my hands, the effects are sooner over with after operating, and causing less irritability of stomach. It should ever be remembered by the profession that an agent capable of destroying sensation and suspending the functions of intellect is, *indeed*, a dangerous one, and he who does not properly appreciate its power, and use every precaution to prevent its baneful influence is more to blame than the remedy.)

The incision was made in the linea alba, commencing about two inches below the umbilicus and extending towards the pubis full six inches in length. Upon examination I found the sac firmly adherent to parietes of abdomen along the edges of incision, and above the navel for some distance. The cyst was punctured with trocar, and a large quantity of fluid removed and saved. Finding it necessary to enlarge the incision I extended the cut above the navel to the right which was in its entire length, ten inches with cutting edges of scalpel, handle, and fingers carefully used I succeeded in breaking up the adhesions which extended on either side to the distance of between three and four inches. There was no attachment to omentum or bowels. The tumor was carefully removed, the pedicles soft and flattened, transfixed with carbolized silk ligature and detached from the right side of uterus. On the omentum I discovered a hard vascular growth, about two inches broad, which was ligated and removed; but having no connection with the tumor. The ligatures were cut as close to the knot as possible. The left ovary was carefully examined and found to be in a healthy condition. During the

operation a quantity of the liquid escaped into the cavity, which was carefully sponged out, and all removed as far as practicable, disturbing the viscera as little as possible. The incision with peritoneum was closed with thirteen stitches of carbolized silk, supported by long strips of rubber plaster, completed with compress and a many-tailed bondage. The pulse previous to operating was 116, and notwithstanding the patient vomited twice during the operation, her strength was less exhausted than could have been anticipated. She soon recovered from the anesthetic, with a pulse at 118, firm and equal, and expressed herself as feeling quite comfortable, with the exception of a smarting sensation along the line of incision. In half an hour she was placed in bed, and ten grs. of quinine with one half gr. morphia sulphate, given. Laudanum in 10 drop doses was ordered to be given every one, two or three hours in order to keep her in a perfect state of repose, and prevent any action of the abdominal viscera. The system was supported by nourishing diet, and brandy used as occasion required.

The catheter was used on second day to relieve bladder. There was no necessity for its use afterwards as the urine passed unaided.

The time occupied by the whole operation did not exceed forty-five minutes. The tumor alone, without fluid, weighed 4½ lbs; but with fluid saved, and that drawn off a short time before operating weighed 43 pounds. The carbolic acid treatment was continued as a dressing, no pus formed and the wound united by first intention its entire length. Five of the stitches were removed on the fifth day and the remaining eight on the twelfth day.

After the removal of stitches she stood upon her feet, had gained strength and flesh and seemed to be quite well. In three weeks there was quite a free discharge of *menstrual fluid*, which returned at proper intervals, following months in usual quantity, giving no trouble.

On 7th of May she rode in an open buggy a distance of fourteen miles, expressed herself as being grateful for my kindness, was looking well, and was quite cheerful, carrying upon her arm a large basket used as a depository for purchases made during the day. She informed me the accustomed discharge had not made its appearance. I made inquiry as to sexual desire which was answered by saying, she felt no difference. I concluded conception had taken place.

She is at this time in good health with the prospect of a long and useful life.

The tumor and sac I have preserved and it is quite a curiosity to one who has never examined a multilocular cyst.

The number of small cyst enclosed in the larger sac are quite numerous and of varied sizes, and it is a matter of astonishment with what rapidity another fills after one is evacuated as shown by the frequent removal of liquid as stated above.

## REPORT OF THE CHAIRMAN OF THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

Read before the Medical Society of North Carolina at Tarborough, N. C., May 16th, 1883.

By J. M. Hadley, M.D., LaGrange, N. C.

Limiting myself to a review of the progress of Obstetrics and Gynecology for the past twelve months as nearly as possible, I find it difficult to give a comprehensive view of the subject.

I think I am safe in saying, that there has been but little of that audacity in surgical gynecology which has marked several years immediately preceding. These branches of medicine seemed to have reached a stage, where it becomes necessary to examine and test old methods, rather than enter upon new problems. Upon the whole we must consider this a more healthy condition, than that feverish excitement, which found no gratification except in the announcement of some bold and startling adventure in surgery. In these latter remarks we refer more particularly to gynecology.

### THE USE OE FORCEPS.

The more extended use of obstetrical forceps, in general practice, is a marked feature of the advance which is being made in obstetrics. Notwithstanding that such an instrument, so attractive to the young physician for its possibilities in extricating not only their suffering patients from difficulty, but in bridging them over difficulties, it is rather surprising that the general use of obstetrical forceps has been

only recently adopted. No doubt there are many younger members of the profession who can recall the name older practitioners who in long years of practice had never applied forceps, or even owned a pair.

It is not necessary, or in place, to go into an extensive examination of the history of the introduction of the forceps. We think that the chief reason they were so little used by practitioners of a past generation, was because only a few students were taught clinical obstetrics, the large majority of them never having applied forceps even to the mannikin. Then the influence of the older authors rather deterred physicians from their use, first by the complex directions given, and then by the warnings about dangers to the maternal soft parts. To some physicians the warning of Blundell was ever sounding in their ears: "Beware of the perineum."

I have stated the general observation as to the use of forceps, without giving my assent to the meddlesome midwifery which such an increased employment of them would indicate in the minds of some. I am satisfied though that this increased employment does not indicate an increase of meddlesome midwifery, but ensues rather from a more practical method of teaching obstetrics. Another potent influence, has been the greater familiarity that medical men got during army service, with capital operations in surgery, thereby giving more boldness, and self-reliance to the profession. Many of us who had only seen the ordinary run of civil practice, had difficult surgery thrust upon us, and taught in a school of necessity, we brought home with us much of the enterprise, which a surgical atmosphere engendered. Whether I am correct or not in my reasoning, I am confident that I am correct in my belief, that obstetrical forceps are now more generally used, and that the *laisser faller* practice at the lying-in couch, in this country, will soon be a thing of the past.

### THE INFLUENCE OF TOBACCO ON MENSTRUATION AND PREGNANCY.

This is not a new subject. Even as far as 1878, when Dr. E. F. Ashe, of Wadesborough, called the attention of the profession to the serious anæmia which the use of snuff induced among women, and that this anæmia caused some fearful post-partum hemorrhages, the subject had become a matter of anxious thought by the profession in this State.

In an article in the *Annales de Gynecologie* by Dr. Piasecki, *on the Influence of Tobacco Manufacture on Menstruation, Pregnancy, and New-Born Children*," is another phase of the same subject, which will be of interest to us. Dr. Piasecki examined 540 women employed in the tobacco manufacture at Havre, with reference to the general influence of tobacco on their generative functions. His conclusions were: (1) Tobacco cannot be regarded as an emmenagogue. (2) The various labors to which the fabrication of cigars, etc., give use, produce no unfavorable influence on the work women. (3) It has no injurious influence on pregnancy. (4) Abortions are not more common among the work-girls of the manufactory of tobacco at Havre, than among other women in town. The cigar girls, who are more sedentary in their habits, are those chiefly affected by miscarriages. (5) The mortality among the new-born children was considerable, 233 deaths in 376 births. These deaths did not depend, however upon the employment of the mother, but upon the general unsanitary condition by which they were surrounded.

I have quoted this more because it is recent, rather than for the conviction such a paper would carry.

I think it would be a study well worth the attention to enquire into the influence which tobacco has upon menstruation, pregnancy, parturition, and the life of the infant.

Dr. Evans, of Florence, S. C., in a report to the South Carolina Board of Health writes as follows:

" No form of using tobacco is so repugnant to every feeling of delicacy and refinement as the disgusting habit of dipping snuff, which is practiced by females belonging to the lower class of white people in the South and West. The favorite preparation of tobacco used for this purpose is Scotch snuff. These women use brushes made of small twigs, with which they rub their teeth or chew after being dipped into snuff. The mouth, teeth, and lips are deeply stained with the tobacco, and, as they seldom relieve themselves of the excessive flow of saliva by spitting, a considerable quantity of snuff reaches the stomach. They jealously conceal the practice from strangers and persons whom they suppose are not addicted to the habit. It is considered almost a breach of hospitality not to provide snuff and twigs for brushes to their friends and associates when visiting their houses. The althea, on account of the facility with which its bark strips, its agreeable flavor, and the fine, white and

tough fibres of the wood, is prized very much as a material for brushes. I have known this ornamental shrub to be cultivated by some families solely with a view to this use.

"Persons who take snuff in this manner for any length of time have a striking and characteristic appearance. Usually they are very thin and emaciated and the subject of marked anæmia. The feature which strikes us as the most peculiar and interesting is the discoloration of the skin. The complexion of the fairest blonde will lose its transparency and whiteness and assume a yellow tint, which in many instances deepens and becomes positively dark and swarthy. I believe, too, it has a similar effect on the color of the hair, giving it a darker hue, and at the same time rendering it dry and harsh and less glossy. These women are martyrs to dyspepsia and the neuralgias, always complaining of loss of appetite, lumps in their throats and shifting pains in every part of the body. They are great coffee drinkers, and when they have the means to keep a supply on hand usually drink freely of it through the day. Coffee is a very good antidote for the depressing effects of tobacco, and I have no doubt these people drink it for the relief it affords them for the debility and sense of sinking from which they so often suffer. All of the baneful effects of excessive chewing are found in exaggerated degree in individuals who take tobacco in this way. Their children, more especially the girls acquire the habit at an early age, usually before they enter their teens. The frail body, pallid face and pinched features contrast painfully with the plumpness and ruddy hue and glow of healthy children. The pallor of some of these children is distressing to behold; the skin is almost of marble whiteness, and there is an absence of color in the lips, and even in the tongue. The abdomen is somewhat tumid and there is some enlargement of the spleen. They are listless and quiet and sedate beyond their years; they seldom engage in play, but are content to look on from indisposition to take part and from sheer breathlessness. Finally, a sub-febrile state ensues, attended by more or less diarrhœa, which medicine is powerless to control. While the use of tobacco in this form may not be the sole cause of this profound anæmia, yet it is the prime factor in producing it, aided, perhaps, by an inherited weakness of constitution and poor and unsuitable food. The importance of preventing children from acquiring the habit of using tobacco *in any form* cannot be too strongly impressed on parents."

## HOT WATER IN OBSTETRICS AND GYNÆCOLOGY.

Hot water as a therapeutical means in the arrest of post-partum hemorrhage is steadily growing in favor. Like all useful things, "it is used for everything," but it will ere long take its proper therapeutical position. Many good reports have come to us in the past year. In a very interesting paper by Dr. Lebedoff, (London *Medical Record*, May, 1882) he tells us that he uses vaginal douches in post-partum hemorrhage, at from 110° to 117° F. Only very stout patients, quite insensitive to heat, required the use of water at 122° F., and the repetition of them every half an hour four or five times successively.

We believe it is in pelvic cellulitis that hot water injections are the most valuable agent. Nothing facilitates the absorption of inflammatory products, in peri- and para-metritis, and metritis, so effectually as hot water douches, repeated every two hours for some days.

### UTERINE HEMORRHAGE.

As our experience in agents known as hemostatics accumulates, it seems that there is something still more desirable. We know that it is the custom with good obstetricians, to employ ergot, to anticipate post-partum hemorrhage, by giving full doses just before labor terminates. In the case of primipara, for instance, this routine practice has some disadvantages. Suppose a primipara has a full dose of ergot just as the head is bulging the perineum. By the time the birth is accomplished, and secundines are removed, you have active contractions. These contractions continue for several hours, if your ergot happened to be of good quality, and your patient will probably have such considerable pains as to require an opiate. A primipara should not have these hard after pains, and the dose of ergot, cannot be regarded otherwise than as a harmful dose. For this and for other reasons, good practitioners are abandoning, or will abandon this plan as far too routine, and look for others. We have at our command the hot water douches, attainable with less preparation than the ergot, even in the lowliest home.

## CINNAMON IN POST PARTUM HEMORRHAGE.

The attention of the profession has been recently called to an old remedy, by a writer in the NORTH CAROLINA MEDICAL JOURNAL:

"Mrs. ———, a multipara, had a miscarriage at the fourth month. Secundines were believed to be entirely removed. She got up rather early and undertook fatigue ill suited to her condition. Shortly after she went to bed with uterine hemorrhage, which lasted four days, and yielded to ergotine. I believed that the patient had hemorrhage because of an old cervical laceration. Hemorrhages recurred at variable intervals until six weeks after the miscarriage she was taken down with violent pains and slight hemorrhage, at which time, shreds of placenta were expelled. For several days this state of things lasted, the patient having considerable fever. From this time she was confined to the bed four weeks.

"The uterus was thoroughly examined, it being in a patulous condition, but no remnants of secundines were found. Several clots were turned out. The hemorrhage still persisted with accompanying pain. Jamaica Dogwood in teaspoonful doses every five hours relieved the pains but produced constipation, contrary to my former experience. The hot douche was faithfully applied as hot as it could possibly be borne. Fl. ext. ergot was given in teaspoonful doses every three hours, in conjunction with the douche, but without avail.

"Styptic applications (Monsel's solution) were applied to the uterine cavity without avail. Now, what appeared to be the regular menstrual flow came on, and all treatment was suspended.

"A lady friend called to see my patient, and advised her to use cinnamon, as it had relieved her in similar circumstances. I did not object, and after waiting for the time to elapse calculating it for a usual menstruation, she tried the remedy. A decoction of one half ounce of powdered cinnamon was made in a half pint of water. At 11 o'clock the first dose was taken, and by 1 o'clock the flow became paler, and so continued to diminish until next morning, since which time there has been no sign of hemorrhage. You can imagine my surprise when I found that the first two authors I consulted, Stillé and Farquharson mention the power of arresting uterine hemorrhage as one of the properties of cinnamon.

"I looked further and found that Wood and Bache, Emmett, the

scholarly old West, all mention the remedy but 'damn it with faint praise.'" Yours truly, J. R. L.

### CINNAMON AS A UTERINE HÆMOSTATIC.

Since the correspondence of J. R. L., in the November issue of the NORTH CAROLINA MEDICAL JOURNAL, on the use of cinnamon in the arrest of uterine hemorrhage, we have had further experience, tending to substantiate what our correspondent has written.

The circumstances are these:

A multipara had uterine hemorrhage during four months succeeding her seventh labor.

Examination revealed a subinvoluted uterus, with a deeply lacerated cervix. The woman was anæmic and feeble from great loss of blood.

The line of treatment adopted was after the usual course—rest with the exhibition of ergot, gallic acid and other medicines by the mouth, and styptic tampons into the vagina. All these failed.

A decoction of powdered cinnamon was given over night and an examination made the next morning in the genu-pectoral position. As soon as the beak of a Sims' speculum was put in place, a copious hemorrhage followed. A solution of ʒ i to ℥ jv) persulphate iron was then injected rapidly into the cavity of the uterus, and the altered blood came away slowly in a stream of about the consistency of soft mush. The uterus was then wiped out with a pledget of cotton wet with iodized phenol (Battey's). These failing, and the hemorrhage returning, the patient was put to bed and a decoction of cinnamon (1 oz. to 1 pint of water) was administered; and under its influence the hæmorrhage ceased. Large clots were expelled the first 24 hours, but subsequently there had been no return of the hemorrhage.

While this subject requires more extended trial we do not believe it is premature to claim for cinnamon, for the arrest of uterine hemorrhage, a place of more importance than that of ergot, gallic acid, or any other reputed hæmostatic. We hereby restore an old drug to a position long ago claimed for it and learn the lesson which the best therapeutists should not be above learning—not to despise a remedy because it is common place and has only the recommendation of the old women.

A second article, on the same subject, an editorial in the JOURNAL confirms this by additional experience. Since then we note that considerable interest has been felt in the ultimate standing it may take.

1. A good draught of the infusion can be taken by most patients without rejecting it.

2. It does not cause violent pains like ergot.

3. Its action is sufficiently speedy, arrest of hemorrhage being accomplished many times in from one to three hours.

4. It is an article so much used in cookery, as to be easily attainable.

### TRANSFUSION IN UTERINE HEMORRHAGE.

During the past year the discussion of transfusion either of blood or milk has not occupied a prominent place. We think it must be because the professional mind had settled into a conviction, that the operation has its dangers and its inconveniences, does not admit of the delay necessary to hunt up suitable apparatus, and cannot be resorted to in time to promise success. We have noted, though, another suggestion in regard to transfusion, which is worth investigation.

Dr. Bischoffin (*Correspondenzblatt für Schweitzer Aerzte*) reports a case of post-partum hemorrhage, in which the patient was in a state of extreme collapse, pulseless, respiration 42, cold extremities, etc., and could not be relieved by posture and stimulants. The left radial artery was exposed, divided, and the central end ligatured; a vulcanite canula was passed into the distal end of the vessel, and through this, by means of a piece of India-rubber tube and a funnel, previously purified by immersion in carbolic lotion, 1,250 (about 4 ozs.) of a six-tenths per cent. solution of sodium chloride, alkalinized by the addition of two drops of liquor potassæ were injected in the course of an hour. During the transfusion, the patient rallied, the pulse was 122, and she finally recovered. He points out that there were none of the usual signs of oppression, etc., met with in other transfusion cases. He thinks the amount injected should be at least a pint, and that liquor soda should by preference be used to render the solution alkaline.

It will be remembered that this kind of injecture into the circulation (it should not be called transfusion) was performed many

years ago in the collapse of cholera, and with claimed success. It is well to keep it in mind, and investigate it as opportunity arises.

### RESUSCITATION OF THE NEW-BORN.

The application of hot water in uterine ailments, in abortion, in uterine hemorrhage, &c., has already been spoken of, but still there remains another application of hot water, in resuscitation of the new-born, as recommended by LeBon. Dr. Rusanovsky relates a very interesting and instructive case (*London Medical Recorder*, May 15, 1882) of asphyxia neonatorum, in which, after entirely unsuccessful application of the usual methods, he resolved, *in extremis*, to try hot water treatment, lately recommended for the still-born by LeBon. As there was no bathe at hand, the author took a common iron pail, filled it with very hot water, and at once immersed the infant (who was pulseless and cold), leaving free the head alone. One minute afterwards—eighty-seven minutes after birth—the first inspiration was made, and the child's life was saved. The author points out that LeBon's method is exceedingly simple, easy, conveniently practicable under all circumstances, and does not fatigue the obstetrician. As to the *rationale* of the method, the author is of opinion that the first inspiratory movement results from the powerful exciting influence, produced by hot water upon the peripheric nerves of the skin, and from the subsequent reflex action of the respiratory centre in the medulla oblongata.

### PREMATURE DELIVERY FOR THE PREVENTION OF BLINDNESS.

Dr. Edward Loring, of New York, (*Obstetric Gazette*, February, 1883) gives a paper which covers ground quite new to many of us. Cases of blindness coming on suddenly during pregnancy, due to albuminuria, are very distressing, and indeed threaten permanent disaster.

1. That examinations as to the conditions of the eyes of pregnant women should be made much more frequently than they now are; and that these should be made in a routine manner, even when the patient does not complain of any disturbance in vision, since it has been discovered that about one-third, or thirty-three per cent. of those who have an organic lesion of the retina or optic nerve from

kidney trouble, either have none, or make no complaint of any reduction of vision. This seems almost incredible to the general practitioner, but the old ophthalmologist has become only too painfully aware how often, and for how long a time. eyes may be affected with an inflammatory process of great intensity and yet give rise to no complaint on the part of the patient. Thus a retinitis or a neuro-retinitis, which, in its primary stage, may exist, and often does, for months unsuspected by either the patient or physician, may lead, after a long interval, through the secondary or atrophic state to complete blindness.

From the fact that no complaint is made of any loss of sight until near the end of the pregnancy, it has been assumed that the trouble did not begin until that time. I am inclined to think, however, that while this is no doubt true, especially of the cases of uræmic origin, there are very many cases, especially those dependent on albuminuria, in which the trouble really began long before; and that the eyes if examined, would often have give evidence of disease long, oftentimes months, before the explosion took place which has cost many a mother her eyesight, and oftentimes her life, both of which, by a timely examination and a timely operation, might have been saved. I will even go so far as to say that evidences of albuminuria not infrequently show themselves in the eye before any manifestation can be had in the urine.

It will be said at once that it is requiring too much of the general practitioner or obstetrician to suppose that he shall acquire the requisite skill to use so difficult and intricate an instrument as the ophthalmoscope. That the opthalmoscope in its widest sense is one of the most difficult of the instruments used for the detection of disease is, I admit, perfectly true, as it is that few obtain a perfect mastery over it. But the same is true of the microscope. To one great microscopist there are thousands who daily use the instrument with the success in the detection of disease, and it might with a little attention, be the same with the ophthalmoscope. Much as I admire the high standard of skill which some of those specially trained to its use naturally acquire, nevertheless, I firmly believe that the sphere of its greatest usefulness, and therefore of its greatest triumphs, will one day be in the hands of the general physician, and especially in those of the obstetrician. Thus, Mr. Eales reports that a single physician was able to furnish him for examination, from a

single hospital in Birmingham, twenty-eight cases of neuro-retinal disease from kidney trouble in one year, while out of 11,000 cases of general eye disease at the eye infirmary only four such cases were seen.

2. I would conclude that where a marked deterioration of vision has occurred, with or without ophthalmoscopic changes, and where blindness is threatened, premature delivery is not only justifiable, but often demanded.

3. When a permanent loss of division has occurred from a preceding pregnancy, premature delivery in a subsequent one, when surrounded by its proper safeguards, is not only justifiable, but at times absolutely necessary, and that, further, when a loss of vision, either temporary or permanent, has once resulted from gestation, it is the duty of the family physician or obstetrician to explain, both to the wife and husband, that the cause of the trouble is a constitutional and not a local one, and there is every probability of recurrence of the trouble in succeeding pregnancies which may lead, not only to the destruction of vision, but even to loss of life.—*N. Y. Medical Journal*, Jan. 20, 1883.

## THE EFFECTS OF CHLOROFORM AND OTHER MEDICINAL AGENTS AND VACCINATION ON THE FŒTUS.

The investigations under this head have extended over a large number of years, and the record is immense, but still all the physiological and therapeutical aspects of the case have not been final and satisfactory.

The question of the effects of chloroform on the fœtus have been variously estimated. Upon the whole, the vast weight of opinion favors the harmlessness of it to the fœtus. It is doubtless true that the mother may be so deeply narcotized with chloroform, during a prolonged labor, that fatal narcotism of the infant would result. But according to the usual plan of giving a few whiffs of the drug to the patient, as soon as she gives warning of approaching pain, that is in the interval between the pains, the anesthesia only reaches the stage of beginning oblivion, and in such quantities can do no harm.

We have a recent experiment by Hoffmeier, of Berlin, who examined the urine of several children born while the mother was under the influence of chloroform.

He discovered that for the first twenty-four hours, the urine and its constituents were increased. This was but a trivial discovery, and the weight of accumulated experience goes to show that chloroform is never safer than when administered during labor. The effects of morphia upon the suckling child after its administration to the mother has also proven harmless.

The old question of the influence upon the fœtus in utero of a vaccination performed upon the mother has again been brought, and discussed with renewed vigor, in the light of the advance of knowledge of animal inoculations, and the behavior of microscopic organism in the blood current.

We quote the following from the North Carolina Medical Journal of March, 1883:

Vaccination During Pregnancy: Its Effect on the Fœtus. —A recent number of the *Zeitschrift fur Geburtshulfe und Gynakologie* contains a laborious article by Dr. Carl Behm, of Berlin, on the above subject. The question whether the blood-changes wrought by vaccinia germs affect the fœtus in utero as well as the mother has been a good deal discussed on merely theoretical grounds. Bollinger formulated the doctrine that the placenta formed a kind of physiological filter by which corpuscular matters in the maternal blood were held back, and prevented from contaminating the fœtus. But since then Spitz and Albrecht have detected the spirillum of relapsing fever in the blood of the new-born infant—an observation which appears to refute the dogma of Bollinger. He has, consequently, since retracted the proposition; and, believing it possible for blood-poison, whether corpuscular or not, to pass from the mother to the fœtus, he has stated that when a pregnant woman is successfully vaccinated the fœtus participates in the infection, and, it of course follows, in the protection conferred thereby. The same view has been taught by Curschmann. These conclusions are supported by certain published cases in which the vaccination of children, whose mothers had been vaccinated during pregnancy, was effected without result. Isolated cases, however, prove nothing, for the failures may have been due, for instance, to bad lymph, or to unskilful performance of the operation. The most numerous observations are those of Burckhardt, who vaccinated twenty-eight pregnant women; but, of their children, in only eight was the inoculation successful. This series, however, was not tested as it should have been, by the vaccination, with precisely the same kind of lymph and in the same manner, of children whose mothers had not been vaccinated during pregnancy. Opposed to these are the observations of Gast, who vaccinated 16 mothers during pregnancy, and subsequently every one of their children, with success. This divergence in the results of expe-

rience led Dr. Behm to investigate the matter. He vaccinated 47 pregnant women, but was only able to get at the children of 33. Of these 33 mothers, 22 were vaccinated in the tenth lunar month of pregnancy, 10 in the ninth, and one in the eighth. In 4 the vaccination was ineffectual, in 3 of them the non-success being proved to be due to the lymph employed. In the remaining 20 pregnant women successfully vaccinated, in 7 the vesicles were not good, but in 22 the inoculation produced perfect and typical vaccine vessels. Of the 33 children, 25 were vaccinated successfully, 8 unsuccessfully. Of these failures, 6 were (by test vaccinations on other children) shown to be due to bad lymph. In one of the other two the lymph used, although it produced vesicles in other children, did not produce good ones. In the remaining case the lymph employed was good and potent. But this case, Dr. Behm remarks, ought to be tested by repeated inoculations before concluding that the non-success was due to protection acquired in utero from the vaccination of the mother. The children of the four mothers in whom vaccination had failed were vaccinated with perfect success. Of the remaining 21, in 15 perfect vessels were the result; in 6 the vesicles were slightly modified, being few in number or small, but all ran a typical course. Dr. Behm, therefore, concludes that vaccination of the mother during pregnancy has little, if any, influence on the fœtus; but it is possible that it may sometimes protect the fœtus. He concludes with an argument for the re-vaccination of pregnant women, and the vaccination of infants as early as possible.—*Medical Times and Gazette.*

Vaccination During Pregnancy.—At a meeting of the Boston Medical Society, Dr. Martin showed a specimen of a fœtus which had contracted vaccinia in utero from the mother. Illustrates Dr. Meigs' statement that "vaccination during pregnancy is murderous."—*Boston Med. and Surg. Jour.*

Negative Effect of Vaccination of Fœtus—In the *Maryland Medical Journal*, January 15th, 1883, Dr. Powell reports the case of a lady in the eighth month of pregnancy, whom he vaccinated successfully. Since her confinement her child has been vaccinated and has had a typical crust and scar, showing the absence of any protective influence from the mother's vaccination.

## OXYTOCCIC EFFECTS OF QUININE.

This question was reviewed during the year. Dr. R. L. Payne, Jr., of Lexington, maintained the negative of the proposition in *Gaillard's Journal*, and his views are endorsed by a great many good physicians. The experience of Southern doctors in the use of quinine during pregnancy is being published quite voluminously

now, so that persons in possession of the monographs of Prof. H. F. Campbell, M.D., and Prof. O. F. Manson, M.D., and Dr. Payne, before mentioned, would have the best views on the subject extant.

For the past year a controversy has been going on, to prove the priority of the discovery of treating displacements, and hyperæmia of the uterus, by packing the vagina with cotton. The method is advocated by Dr. Bozeman, of New York, and Dr. Taliaferro, of Atlanta, is new as to all its details, nevertheless this plan has been employed in some way for many years. Our attention was called to it many years ago, in treating vaginal gonorrhœa. After many unsuccessful courses of treatment we consulted Scamzoni. Although an author rather on the old fogy list, we got substantial help from his suggestion. He recommended the incorporation of powdered alum into the fibres of cotton,and packing the vagina. The theory was, that the cotton would absorb the secretion, the alum would exert a remedial effect, and the plug of cotton separates the vaginal walls widely and thus overcome friction. Doubtless many such devices have no date of discovery, being suggested by experience and worked out gradually.

At any rate, the mode of treatment, if it proves successful, will surely supersede many of the far-fetched contrivances now in use, and pluck the laurels from the grasp of the young specialist, who generally makes his *debut* by attaching his name to a new pessary.

If it were only maintained that the ill-consequences attributed to displacements were their occasional and rare results, of course figures would not prove the contrary. But the very reverse is held. The displacements are held to be the keystone of uterine pathology; the *fons et origo* of most uterine symptoms; conditions which only exceptionally exist without causing suffering. Against such a view the statistics are absolutely conclusive. The broad fact that the displacements are quite as common in the healthy as in the sick, must be explained or shown to be erroneous, otherwise it is fatal to the mechanical system of uterine pathology. That which is most surprising is that, notwithstanding the many years that this theory has been before the profession, has been advocated, discussed and practiced, no one until quite recently should have ever thought of investigating the primary and fundamental question raised in the researches to which we have referred—the question upon which depends the whole theoretical edifice.

In no department of medicine has there been a greater reäction than in gynecology. The surgical side has certainly reached the zenith of its fame. If the active cultivators of this branch of medicine will begin now to broaden the foundations of the science and art, there need be no danger that they will raise too high a pinnacle. But "not proven" is marked upon so much of the boasted curative results of surgical gynecology, that a sober-minded general practitioner must await a maturer development, before he burdens himself with the expensive outfit necessary to follow the specialist.

## REPORT OF THE CHAIRMAN OF SECTION ON PRACTICE OF MEDICINE.

Read before the Medical Society of North Carolina at Tarborough, N. C., May 16th, 1883.

By Geogre W. Long, M.D., Graham, N. C.

*Mr. President and Gentlemen:*

To go over the field of Practice and to examine work already done by others and to arrange it in a comprehensive whole, so as to make it instructive to others is no inconsiderable task, and I regret exceedingly that your kind partiality has imposed that duty upon me.

History tells us that this process of collection, has been going on in all civilized countries and in all ages by men among the first, certainly, in mental powers and attainments. The material thus accumulated has been from time to time, subjected to careful scrutiny and the useless which must ever, while human judgment is fallible, human passions have their ordinary influence, mingle in greater or less proportion with the true, have been, in a considerable degree separated, thrown aside, and forgotten. The medical knowledge of the present is thus the slow growth of centuries, I might say, of thousands of years during which, as in the growth of living bodies,

an intellectual digestion and nutrition have been going on; the useless and effete being thrown off, at the same time that the useful and efficient have been assimilated; the latter, however, constantly increasing in amount, and destined to increase hereafter, until our science shall become mature and nature have yielded to human investigation all that she possesses of the preventive and remedial.

## DIPHTHERIA.

In the quarterly report of the *New York Medical Journal*, June 1882, the substance of Drs. Wood and Formad's views upon the nature of the contagium of diphtheria is stated thus: They believe that both anatomical and clinical considerations point to the pathological identity of diphtheria and membranous croup. They even go farther and assert that all forms of inflammation about the pharynx are the same in kind, and differ only in intensity. When a certain grade of severity is reached, a false membrane is formed, not as the result of anything specific in the inflammatory process, but because any sufficiently intense local irritation is competent to produce a false membrane upon a mucous surface. Micrococci, it is true, are present in greatly increased numbers in diphtheria, and probably act in the transmission of the disease from one person to another, (and in the generalization of the disease in the same person); but their development is to be regarded as dependent upon the local process, and they do not, therefore, precede its appearance. The facts upon which the authors base this belief are these: The micrococci of diphtheria seem absolutely identical with the ordinary micrococci found in all buccal and pharyngeal inflammations, however slight. In all cases of diphtheria the micrococci are found at the seat of the local lesion, but only in the virulent cases are they disseminated through the body and found in the blood. Hence the disease is probably local, in origin at least. Again, the capacity of the buccal micrococci for reproduction by cultivation and their power of exciting systemic disease after inoculation are directly proportioned to the intensity of the local inflammation, being least in simple catarrhs, more marked in mild cases of endemic diphtheria, and very pronounced in the malignant epidemic type of the disease. It is fair, therefore, to suppose that the micrococci owe their virulence to the disease, and not the disease to the micrococci.

Accordingly, the sequence of phenomena in a case of diphtheria is probably as follows: First, an inflammation of a purely local character is started up; the character of the mucous membrane is thus altered, and it now affords a more a suitable medium for the development and reproduction of micrococci; the latter, which have all along existed in a quasi-dormant state on the mucous surface, being placed under these fostering conditions, now become more active and exert a deleterious influence on the surrounding tissues, thus adding to the intensity of the inflammatory changes; and finally systemic infection takes place and the micrococci, now actively noxious, swarm in the blood and aid in the generalization of the disease, and also in its transmission to others. For, once outside the body, these vitalized micrococci, falling on a mucous surface slightly inflamed and thereby rendered fit for their cultivation, aggravate the intensity of the existing inflammatory process and so suffice to change a simple catarrh into a diphtheria.

Finally, the authors not only imagine that diphtheria is thus identical with ordinary catarrhal and croupous inflammations, but they suppose that it may also be identical with other septic processes, such as hospital gangrene, &c., the only differences in the diseases being such as can readily be explained by the difference in the situation of the local lesion.

### TREATMENT OF DIPHTHERIA.

In the *Medical News* December 2, 1882, Dr. E. H. Shell, of Gainesville, Ala., is reported as urging the following method of treatment: To an adult he administers twenty drops of liquor potassæ every three hours in half a glass of water. Half-way between each dose he gives one to two tablespoonsful of syrup of lacto-phosphate of lime. Proportionate doses are given to children. He uses no local application to the throat internally. Externally he uses bacon rind freely and applied to the swollen throat, and if the temperature is high, to the whole body.

The London *Medical Record*, May 15, 1882, offers the following: Dr. Denker (Vracheb. Vedom. 1882, No. 3) who, during his twenty-four years practice in the large Nicolaevsky Children's Hospital in St. Petersburg, treated about two thousand diphtheritic cases, and tried all possible external and internal remedies recommended for

this grave affection. He obtained the best results from the following method, which he has practiced ten years. As soon as white spots differed on the tonsils, the author administered the aqua laxativa Viennensis (compound infusion of senna) in doses of six ounces to an adult man, of five ounces to adult woman, three ounces to a child eight years old, two ounces to a child three years old and a teaspoonful to an infant twelve months old. The dose was divided into three parts; one half was taken at once, a quarter of the dose an hour later, and still later the remaining quarter of the medicine. Abundant liquid stools followed. When the purgation stopped, the author ordered a cooling draught, containing some hydrochloric acid, and, every two hours, a gargle, consisting of equal parts of lime water and hot milk, the same mixture being used for cleansing (by means of a pencil) the throat and nasal cavity. Dr. Denker alleges that, when early begun, such treatment generally led to a rapid recovery of patients.

In the London *Medical Record*, Jan. 15, 1883, Dr. Mossei (an Italian physician) is quoted as discountenancing caustics as he had seen no good results from their use. He prefers lime water as a solvent of the false membrane. From pilocarpin he has not seen much good; cases that would have done well under any treatment did well with it; others did badly, and they probably would have died under any other treatment. Pilocarpin depresses the heart's action; and as the tendency in diphtheria is to adynamia, its employment in repeated doses is to be deprecated. As antiparasiticides he has tried perchloride of iron, sulphur, carbolic acid, and chloral, and is skeptical as to their good effects. To dissolve the exudation is not to cure the disease. A medicine is wanted which would paralyze the morbific infection. This has been found in other affections; but at present, in diphtheria, we can only treat symptoms. The application of ice does good in favorable cases, and in those in which there is œdema of the neck. The most rational treatment is to create a medicated atmosphere, by means of a steam vaporizer, kept constantly at work in the sick room; and to paint the throat carefully every two or three hours with a solution of chloral in glycerine (1 in 5). In the second period, when the false membrane begin to loosen, steam inhalations do good by assisting their detachment. When the quantity of membrane causes distress, the throat may be painted thus: first dried with bibulous papers, and then brushed

with a solution of balsam of Peru (1 to 5). Every precaution must be taken, by isolation of the patient, careful disinfection of instruments and clothes, &c., not to carry the infection.

In the practice of your reporter the following has seemed to meet the requirements ; absolute rest—thorough cleanliness:

Nourishing food, if necessary, by enemas. Frequent inhalation of vaporized warm lime water. Iodine externally over swollen glands. Applications to pseudo-membrane of

Liq. ferri perchloridi, fl ʒ ij.
Glycerine, fl ʒ ij.
Water, fl ℥ ss.
℞

Douche gently several times a day; but omitted if it causes violent resistance or excites vomiting. Internally—stimulants quite freely associated with milk. Quinia, chlorate of potash, perichloride of iron in free and oft repeated doses; *e. g.*, for a child of three years

Quiniæ sulph., gr. ½.
Potassæ chloratis, grs. 2½.
Liq. ferri perchloridi, gutt 3.
Syrupi, fl ʒ i.

Sig. Every three hours diluted with a little water.

If case is very bad, I can give the iron in larger amounts and oftener, say five drops every two hours at three years. I prefer the liq. ferri perchloridi to tinc. ferri chloridi it has more free H.Cl.

## TYPHOID FEVER.

The essential conditions of this disease are so peculiar and anomalous that a perplexing diversity of opinion has been a striking characteristic of all written expressions with relation to its cause and treatment.

Without specially noticing any of the hypotheses which from time to time have been given in support of the cause of the disease, I will call your attention to some of the premonitory symptoms of perforation of the bowel in typhoid fever and to its management, as suggested by Dr. Jno. W. Byers.* He groups the symptoms thus:

*Brit. Med. Jour., Nov. 4, 1882.

1. We are warranted in saying that perforation is met most frequently in the more serious cases of the disease. Liebermister and Murchison both agree in this; the latter states that "in a large proportion of cases of perforation, the previous symptoms are severe, and diarrhœa, as might be expected, is a prominent symptom. This was the case in sixty out of sixty-nine of my patients; in eleven of the sixty the symptoms of the peritonitis were preceded by considerable intestinal hemorrhage, and in many there was an unusual amount of abdominal pain."

2. As regards great tympanites, Sir W. Jenner says: "A single deep slough-formed ulcer will paralyze the action of the bowel and lead to such an accumulation of flatus as produces enormous distension of the abdomen." It is just in such a case that perforation would be likely to occur.

3. Continued elevation of temperature after the third week, in the absence of any complication, usually points to severe intestinal lesion.

4. As to constipation, Sir William Jenner has pointed out that "a single deep ulcer will paralyze the action of the bowel, and so cause constipation."

5. Another symptom is severe tremor.

6. Protracted headache in the early stages is believed by Dr. Broadbent to denote an unusually severe affection of Peyer's patches.

7. Dr. Cayley has directed attention to the value of tâche cérébrale in enteric fever. He says it often lasts for sometime after convalescence has set in, and he regards its persistence as an indication that the intestinal ulcers have not yet healed, and that, therefore, the patient is still liable to relapses and to the complications attending unhealed ulcers.

In the case of which Dr. Byers gives the notes, the symptoms which he thinks pointed specially to the bowel, were the following:

1. The severe tremor was a very marked feature of the case, and the members of his clinical class had frequent opportunities of observing it. In his admirable lecture on the treatment of typhoid fever, Sir William Jenner draws particular attention to this symptom, "Tremor," he writes, "out of all proportion to other signs of nervous prostration, is evidence of deep destruction of the intestine. A small deep slough will be accompanied by great tremor; a large extent of superficial ulceration may be unattended by symptoms. Now, it is deep ulcers following the separation of deep sloughs,

which are specially liable to give rise to severe hemorrhage and perforation." Murchison also lays down the rule, that "severe and protracted muscular tremors, especially when the mind is clear, indicate deep and rapid ulceration of the bowel." His case, in which tremor was a marked sign, and in which perforation occurred, confirms very fully the careful observations of these two able clinical teachers.

2. As regards the continued elevation of the temperature; inasmuch as no local mischief could be detected in any organ to account for this pyrexia, Dr. Byers was driven by exclusion to believe that it pointed to severe implication of the bowel. Severe diarrhœa and meteorism were also present in the early stages of the case. When, then, in a case of enteric fever, we suspect, from the presence of some of the symptoms that have been mentioned, that there is severe and deep ulceration of the intestine, our treatment should, he thinks, aim at keeping the bowel quiet; and, in order to carry this out, a combination of these plans may be adopted.

*a.* The patient should be kept perfectly quiet, and should on no pretext be allowed to sit up or to leave his bed. Indeed, if possible, he should be made to lie on his back. The nurse or other attendants should be made clearly to understand that the slightest movement on the part of the patient (such as sitting up or turning on the side) may cause the wall of the bowel, which forms the floor of the ulcer, to give way, and so precipitate the patient's death from perforative peritonitis.

*b.* The strictest attention should be paid to the character of the food, which, while it must be nourishing, should be liquid; and no purgative should on any account, especially when there is constipation, be given.

*c.* Opium should be given to paralyze the movements of the bowel. By this, which may be called the anticipating administration of opium, the ulcers are placed in a better condition for healing, and the chance of rupture of their floors, from sudden movements of the intestine, is minimized.

In the practice of your reporter, absolute rest in bed, thorough cleanliness and disinfection, a slop diet, opium or some one of its succedanea, in commanding doses for excessive diarrhœa or the restlessness of passive delirium (without regard to whether the tongue is dry or moist) and in the latter stages when hemorrhage

threatens, tinc. of the chloride of iron in full and oft repeated doses have seemed, in a large majority of cases, to preëminently meet the requirements.

The nature of croupous pneumonia, in the *Lancet* for October 28, 1882, offers the following: The nature of croupous pneumonia has always been a fertile field for speculation. The opinion that it is a simple inflammation due to a simple cause long received unquestioning acceptance, until points of resemblance between pneumonia and an acute specific disease led to more careful study of its conditions of origin. It is still to these that the attention of physicians is chiefly turned. Pathologists, it is true, are seeking for its associated bacterial organisms, and we lately referred to the important observations of Friedländer on this subject; but bacterial pathology is still in too early a stage to permit much weight to be placed on the discovery of organisms in association with acute inflammation as evidence of a necessary causal relation. But the etiological facts, if well observed, have a value which no theory can shake, for they must be embraced by it as a necessary condition for its acceptance. Many facts have lately been adduced in support of the opinion that croupous inflammation of the lung is but the local expression of a general disease, and the evidence in favor of this view has been ably summarized by an American physician, Dr. E. Louder, in the *New York Archives of Medicine*. The most weighty evidence is of course that furnished by the analogies to which we have referred, but the occasional epidemic character of outbreaks of pneumonia is an etiological point of considerable weight in support of the theory. It is necessary, however, in order to establish the specific pathology, to disprove the current opinion that croupous pneumonia may result from mere exposure to cold. Some have, indeed, been content to overcome the difficulty by the admission that there are two forms of croupous pneumonia—one due to cold, and the other a specific disease. But the sporadic cases which are usually referred to cold, are precisely those which present that resemblance to acute general diseases which still constitute perhaps the strongest part of the argument for the specific nature of the malady. Accordingly most of the advocates of the latter view have felt that to establish their argument they must disestablish the current theory and disprove the dependence of croupous pneumonia on exposure to cold. The task is one of no small difficulty, and from isolated observations

perhaps impossible. Attention has therefore been turned to the comparison of pneumonia with the meteorological influences. It seems well established that the disease does not coincide in the time of its occurrence with the lowest annual cold. It is not a disease of winter, but of spring. Some facts corroborating this opinion have been lately collected in the *Revue des Sciences Médicales.* In the three great hospitals of Vienna, between 1866 and 1876, 11,442 cases of pneumonia were treated—8,247 men, 3,195 women. The largest number of cases were admitted in the month of April, the next largest in the month of March, and the next in the month of May. Köhnhorn observed in the barracks at Weser 300 cases of pneumonia in the course of eight years, and found that the number of cases in the three months of March, April and May were four times as great as in the months of September, October and November. Worfwinge, in Stockholm, observed a maximum in the month of May. But we can scarcely admit the validity of the assumption, that because pneumonia does not coincide in prevalence with the lowest temperature, it is therefore not due to exposure to cold. The prevalence in Vienna was compared by Biach with the meteorological report, and three conditions seemed to coincide with the disease; a sudden fall in atmospheric pressure, a low temperature, and sudden changes in temperature. A similar comparison has been made by Masson with regard to 400 cases of pneumonia occurring at Berne and Neufchatel, and he found that pneumonia was most frequent when the temperature of the air was low and its humidity slight; and a comparison of the condition on the day before the onset of each case showed with great frequency a sudden fall in both temperature and atmospheric pressure. On the other hand, Köhnhorn failed to observe any relation between his cases and the temperature; but his data appear more open to objection than the others to which we have referred. The evidence afforded by epidemics of pneumonia would be more conclusive if such epidemics were less rare. Nevertheless they are of great interest, and certainly deserve most careful study. Some of them are described by Dr. Sturges in his work on pneumonia, and several others have been lately recorded.

Halcacde and Munneck observed an outbreak of fifteen cases in a small village (Ober-Sikle,) containing only 400 inhabitants, and in some instances as many as three persons were affected in one house.

At the same time other neighboring villages, exposed to the same meteorological influences, and in the same geological conditions, were free from the disease. In the village of Becherboch, with 460 inhabitants, Butry observed as many as twenty cases in the course of a few weeks, and no less than nine were fatal. The cases occurred in a small number of families, which were so grouped around those first attacked as to favor the idea of a spread by infection. In most of the cases the prostration was great; in several there were cerebral symptoms, and in fine there was jaundice. In seven the apex of the lung was invaded; in five the pneumonia was double, in three there was secondary pleurisy. The spleen was not enlarged in any case.

Kerschensteiner observed 161 cases of croupous pneumonia in a prison at Amberg, (Oberpfalz) during the four months January to May. The materies morbi appeared to him to be endemic and not transportable. In a district of Norway containing 6000 persons Loberg observed sixty-three cases of pneumonia in 1879, and twelve occurred in a limited region containing only 200 persons. The cases were grouped, several occurring in the same house. Penkert has recorded an epidemic of forty-two cases, in which he believed himself able to trace an infection from person to person, and Jelley observed a wife to contract pneumonia from her husband, and to communicate it in turn to a sister who nursed her. Similar cases have been noted by Wyman. No instance, however, is more remarkable than that published in our columns by Dr. Daly a year ago, in which six members of one family were affected in the course of three weeks. The rarity and striking nature of these facts, however, may well suggest caution in reasoning from them to the familiar sporadic form of the disease.

Attempts have been made to ascertain whether the contagiousness of pneumonia can be proved by experiments on animals. Kuhn inoculated seventeen animals with the sputum of a case of "endemic pneumonia." Of the rabbits, two died on the first two days with symptoms of collapse, but in six others fever followed the inoculation, and presented critical oscillations at the end of the fifth or sixth day. Diarrhœa and prostration accompanied the pyrexia. The animals killed between the sixth and tenth day showed pleurisy and hepatization of the lung; lobar or lobular. Five recovered. Kuhn, perhaps too hastily, regards his results as affording evidence of the specificity of croupous pneumonia. Those physicians who find, with

Leichtenstein, the contrast in etiological conditions between the sporadic and epidemic forms of pneumonia too striking to be ignored, and ground for a division of croupous pneumonia into two classes, have endeavored to establish a clinical distinction between the two. Scarpari, for example, has lately emphasized the asthenic character of the epidemic form, its association with jaundice, with yellowish fibrinous pleural exudation, the absence of resolution, and the occurrence of changes in liver and spleen similar to those which are met with in acute specific diseases. Loberg observed the frequency with which several initial rigors marked the onset of his cases, sometimes preceded, for three or four days, by the symptoms of catarrhal fever, and the frequency of jaundice, but he failed to find enlargement of the spleen. Several observers have noted the tardiness of resolution and the frequency with which the apex of the lung suffered. Köhnhorn, on the other hand, at Weser, observed splenic enlargement to be the rule. It is very desirable that the actual weight of the organ should be noted in all fatal cases.

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## AN ESSAY ON CONSTITUTIONAL SYPHILIS.

Presented to the Medical Society of North Carolina, at their 20th annual meeting in Tarborough, N. C., May 15th to 17th, 1883.

By Paul B. Barringer, M.D.

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*Gentlemen of the Medical Society of North Carolina:*

Appointed as your essayist at the last meeting in Concord, I have selected for your consideration a subject, old it is true, but one which is now receiving the especial attention of the medical world, and one which, by an almost constant occurrence in your practice, (be it city or country), will, I hope, make it of practical interest to you.

This subject, gentlemen, is Constitutional Syphilis and its Diagnosis.

In taking up this subject I confess to doing so with especial reluctance, for it has been so often before you that I doubt my ability to do more than reiterate the views of my predecessors. Still, believing it to be a subject too much ignored by the general practitioner, I will try to add my experience to the general light. So little attention is paid to this disease by our legislative bodies and sanitary boards, that this neglect and our constant intercourse with it makes us view it in a light different from what we really should. So little sympathy is felt for the ordinary syphilitics that, except in the cities and larger towns, where their treatment forms quite a part of the practice, their treatment is but little studied and their claims upon us greatly ignored. The prostitute and the rake, however, while forming quite a contingent, are not the only sufferers. Our indiscretion is often quite enough to blight a life and bring pain and misery upon beings yet unborn. The unoffending as well as the offender often suffer together, for some of those who go down into the slums come from the sanctity of the marital chamber. Some of you have no doubt seen such cases, and you consequently know that if there ever was an appeal made to your sympathies, it was then. There is but one ameliorating condition about these cases, and that is in the triumph of this branch of medical science. The therapeutics of syphilis has now reached a point where we need no longer speak in measured tones of its capacity, for the diagnosis of syphilis once certain, we have in our hands a power fully commensurate with its insidious strength and venom.

The different conditions and stages of its presentation make the diagnosis of syphilis the easiest, and at the same time the most difficult, of the many difficult problems presented to the practitioner. At the same time, in the whole range of medical practice it is the disease of all others that requires an early and an accurate diagnosis. I know of no malady in which under certain conditions a more serious result may be expected from a few days or even hours of ignorant delay. A softening gumma in the brain, a spreading (tertiary) ulcer of the fauces, or an epilepsy, involving perhaps the function of the brain, will leave nothing to be desired in the way of proof, that he who hesitates is lost. There is no case however severe in which the prognosis is not bettered if we find the earmarks of this disease. With a fair knowledge of the therapeutics and pathology of syphilis, one has a mastery over it, obtained in no other disease.

With a knowledge of these facts then before us, it is astonishing the indifference and ignorance displayed on this subject, the best known perhaps in all medicine.

By inheritance and contagion, (mediate and intermediate) syphilis is now becoming one of the most common of diseases. In the towns and cities of this country it is increasing in a manner almost startling. In the city of New York alone, there are estimated in private and hospital practice forty-five thousand cases of syphilis annually treated (Sturgis). While not quite so bad, there are towns even with us in the South where the percentage is little lower. A disease like syphilis, laying aside its heredity, must increase in proportion to its basis of contagion, and spreading from a class in which its propagation is, with the majority, a business, who can see the end, unless it be checked by some appropriate legislation. This yearly increasing addition of infected blood cannot fail to have its influence upon the stamina of the race or fail to affect, however remotely, all the constitutional ills of its subjects. Already it is felt that a knowledge of its infinite ways of manifestation gives us a control over chronic disease which could not be otherwise obtained

The diagnosis of syphilis is easy or difficult mainly from the difference in the time at which you see it. I say "mainly" advisedly, having often seen how difficult it is to decide at a given period whether a person be suffering from syphilis or not. It is the more tantalizing from the fact that at the time that a diagnosis is most needed, we are often without a landmark. I allude to the dangerous cerebral lesion of late syphilis. As if to compensate for our deficiency in this respect, however, we find that it is here that our therapeutical agents are of most avail. The difficulty in the latter stage lies in the fact that we must depend to such a great extent upon the history of the patient. The physical diagnosis, though mainly of reliance during the acute primary and secondary stages, is still of importance at all times, for few cases are so mild but that we can find in after years traces of the serpent's trail.

I will now take up in detail the characteristic lesions of syphilis, taking them in their order.

*The Primary Lesion.* It is at this stage that the vast majority of cases are seen and it is the stage oftentimes of greatest uncertainty. From the days of John de Vigo to the present, there has been one unacesing war over the morbid anatomy of the initial lesion or

"chancre," which precedes the general manifestations of syphilis. This is proof enough, were others not at hand in the shape of general experience, to prove how uncertain as a diagnostic feature the physical appearance of the chancre is. When typical it is pathognomonic, but how rarely do we see now-a-days a genuine "Hunterian chancre." A syphilitic chancre is a small, almost painless ulcer usually situated upon the genitals, but liable to be found on any absorptive surface of the body. Extra genital chancres are fortunately rare. The syphilitic ulcer is liable to be confounded with the simple venereal ulcer or "chancroid," and sometimes with the ulceration that caps the group of vesicles of preputial herpes. The former, however, has ever been the one that stood in the way of a ready diagnosis. There are still those who believe in the unity of these pathological lesions. Their number is small, however, and they are day by day losing ground. The true chancre first appears as a reddened papular elevation, with nothing to distinguish it from the ordinary isolated papules of lichen, prurigo, &c. From their elementary type, however, it may, and often does, vary widely. The usual modes of evolution in their relative order of frequency are : 1st. The papular elevation becomes denuded of its epithelium and appears as a simple erosion. The shedding of the superficial layer often reduces this papule to the level of the surrounding tissue and whose surfaces where the epithelium is reddened and thin, as in the preputial cul-de-sac, it is a difficult thing to locate accurately. In my mind, to this class belong the occasional cases reported as, "Syphilis without the Primary Lesion." This "eroded papule" forms, perhaps, a majority of all chancres. 2d. An ulceration, more or less extensive, may involve the papule or extend beyond it. This ulcer sometimes assumes a characteristic shape and in conjunction with other things may help out a diagnosis, but one is rarely warranted in forming an opinion upon the appearance of the sore alone. 3d. Still more rare, but not entirely unknown is the chancre in which the papule neither erodes or ulcerates, remaining dry or perhaps a little scaly. This chancre is more often found upon the general integument, than elsewhere and if small is not infrequently overlooked. These chancres are the uncomplicated form and are the usual types, but they may be complicated by constitutional tendencies or external irritants until they may assume characters quite foreign to any adopted standard.

All chancres are liable to, and in the vast majority of cases do assume, a certain specific induration, which at one time was considered an essential. This induration usually appears at the time when the chancre begins to erode or to ulcerate, in point of time about the second or third day, but it may precede any disintegrating change in the papule and when so it is pathognomonic. In its highest development it can be confounded with nothing else, but in its lower forms it is indistinguishable from the ordinary inflammatory induration which may be found with any non-specific lesion. Moreover, gentlemen; and I am sure some of you will agree with me here, its entire absence from some true and undoubted syphilitic chancre is certain. Within the last few years nearly all of our best syphilographers have agreed upon this point, and I would like to ask those among you who have had much experience with this disease; candidly, if they have not seen secondary symptoms follow some of their "soft chancres" or if they have not sometimes waited in vain for after results from what they diagnosticated as, and certainly felt as, "hard chancres." This fallacious test of *induration* has been long enough the cause of warfare among us and of ill-timed advice to our patients.

This induration while alone unreliable is of great importance in connection with other things. The induration itself may be of various types. The thin basic layer forming the "parchment induration," when it lies deeply under the base it forms the "split-pea" variety of the text-books and it may form a mere ring around the sore or involve the whole in a hardened mass the size of a marble. The most distinctive features are, however, its appearances before any break in the tissue and its continuance after the disappearance of the sore.

This germinal cell infiltration which produces the induration in the chancre may also proceed along the line of the lymphatics which transports the virus into the system. This is frequent in the vessels and invariable in the glands. But I will speak of this again.

The differential diagnosis of a syphilitic is mainly to be directed to two things: the simple venereal ulcer or *chancroid* and the ulcer which often forms on the inflamed base of a *herpes preputialis.* Other confounding lesions are too rare, to call for attention.

(To those of you who are wedded to the idea of the unity of the chancreous virus, I will state that I cannot argue that subject in a

paper like this. Being a firm believer in their absolute dissimularity I present this paper from a dualistic standpoint).

Still while a pathological absurdity, the practical confounding of these two lesions is, in absence of concomitant symptoms, of such daily and inevitable occurrence, that we might as well accept this element of doubt as one of the factors against forming too early an opinion.

The history of these two diseases is so unlike that when decided it will settle the matter at once. The period of inoculation of syphilis is always double the time required for a chancroid to become manifest.

The chancroidal virus being a simple corroding agent begins its work at once, while the syphilitic virus must produce its constitutional reäction ere we have the first symptom. As far as I can learn where a close watch has been kept no chancroid has ever appeared as late as the 10th day after intercourse nor has any true syphilitic chancre ever been known to appear that early. Practically, however, so many of the patients who bear chancres can tell so little about it that this otherwise important aid is much crippled. In those of our patients who are so "loose about" that they can neither designate the time nor the party, the concomitant symptoms of the chancre forms our main reliance. There are the bubo and its quondam companion lymphangitis. When a lymphangitis is not acutely inflammatory it is almost certainly specific. It is in the bubo of syphilis, however, that I have learned to put most confidence and the more I depend on it and study it, the more does it seem to me to be the one main reliance. It possesses several characteristics peculiar to itself alone. While the time at which it makes its appearance may vary somewhat, its presence is as near as any symptom can be, invariable. When upon the line of the genital lymphatics as in the vast majority of cases the bubo is, we find instead of the large, tender, inflamed, solitary gland of simple adenitis or still more marked one of the chancroidal bubo, a chain of slightly enlarged, hard, painless and non-inflammatory glands, lying like a "string of butter beans" up the inguinal fold. So entirely non-inflammatory are they that they are usually unnoticed by the patient. Some few, however, complain of a temporary "stiffness" in the leg. The group usually consists of several glands of uniform size though uniformity is not essential.

The bubo of syphilis is almost invariably bilateral, an important point when we consider how frequently in this region the so called sympathetic bubo is confined to the side of the absorbing radical. I have never seen a bilateral sympathetic bubo in which the exciting lesion was not found on both sides of the median line. Commonly then when we see a double bubo, with the lesion met in the median line, we have a strong cause for suspicion, especially if we have the small multiple indurated glands so unlike the large, tender, often inflamed monad of direct absorption. In the very rare instances in which the bubo of syphilis is confined to a single gland, its induration and general non-inflammatory character usually render it easy of diagnosis. Moreover then, apparently, single large glands are usually made up of a mass of small glands matted together and have upon careful examination a distinctly nodular feel. Quite frequently you will find with a syphilitic bubo, indurated glands some distance below Poupart's ligament, and on one or two occasions I have seen the glands enlarged along the line of the chord and just over (or in) the external abdominal ring. This enlarged gland in the external opening is not so very rare. It much resembles, when large, a commencing hernia, but is, of course, hard. In, I believe, all cases where I saw it, there was jaundice. The extra genital bubo, however unlike the above, is nearly always single or at least comprised of one or two quite large glands. In other respects they are alike, hard, moveable and painless.

The syphilitic bubo has no tendency to suppurate. In run down patients we sometimes find an open syphilitic bubo, but in such cases we would probably find that a simple sympathetic bubo would suppurate. This open syphilitic bubo is *always* the result of irritation or cachexia and not the result of any inherent tendency. It is never virulent, nor is its pus auto-inoculable.

I have refrained from alluding to phagedæna or any of the other complications of the chancre as they are non-essentials. Usually when let alone a chancre subsides in from two to eight weeks.

The differential diagnosis of *herpes progenitalis* is at times quite troublesome, especially in unclean patients where the retained secretion irritates the ulcer. By means of a pocket glass of five or six diameters we may usually see a ring of small vesicles around the base of even a deeply ulcerated specimen. The absence, or

peculiar type,of the concomitant symptoms is of diagnostic assistance. Isolated papules of acne indurata when found upon the penis or scrotum may be sometimes seen and are, from physical characteristics alone hard to tell from one of the types of chancre, but all other symptoms are lacking. A urethral chancre is usually to be felt along the canal by feeling the organ from behind forwards. This movement will usually bring some blood also. I have once or twice seen at venereal clinics a chancroid (which by its virus descending a follicular opening and starting a deep seated inflammation) mistaken for a true chancre, until the corroding agent reached the surface. The early condition of this anomaly is very like a chancre, but strangely, they are (at least the one or two I have seen) multiple.

Having completed the history of the primary lesion and its ordinary concomitants I will proceed to take up the study of the constitutional manifestations. Before doing so, however, I will say that exercise what care you may, there will be many cases in which it is absolutely impossible to make a diagnosis, that you would like to risk your reputation on, or the peace of mind of your patient. Under these circumstances it is best to tell your patient plainly the circumstances and difficulties of the case and wait for confirmatory symptoms. If he is too restless, begin some harmless medication to ease his mind while you wait. Give society the benefit of the doubt until you are sure your patient is not infected. The time then, Gentlemen, required, after a suspicious sore, before you can say with absolute certainty that your patient is safe, is the next point. The time recorded by reliable observers varies. Three months is by nearly all regarded as a limit, and we may say that Ricord's law of six months is beyond a possibility of doubt. *This is true, however, only of those cases in which no anti-syphilitic treatment (mercurial) is used.* It is right here gentlemen that I believe the most general fault in the management of syphilitic cases is found.

The general practitioner in the hurry and rush of a laborious professional life is too apt, when he meets a case that is doubtful and requires a most studious attention, to put the patient upon anti-syphilitic treatment, "to be on the safe side," after, perhaps, "burning" the ulcer. Those of you who have seen the certain and complete benefit of a well selected course of mercurials, in banishing the outbreaks of early syphilis, need not to be told, that the same remedies may restrain and hold in check, for periods most indefinite, these

threatened outbreaks. But some are not content with this, after a few weeks or most a few months of their "safe side" treatment he sees his patient's chancre gone and his hair still on his head and he tells his rejoicing patient he is now safe. Stop treatment and go. To the credit of the patient, be it said, this doctor don't often see him again, but some other one does, for he goes from his first love preaching a dire homily upon absolute incapacity and unparalleled deceit of not only him, but the medical world in general.

It is to ward us against such events, for the uncertainty of patients is well known, that I would reiterate my belief that except in the most clearly marked cases it is better to wait for confirmatory symptoms than to give too premature an opinion. On the other hand, should you start your patient on a mercurial course, in many instances this will allow the development of the symptoms in so light a form, that he will quit his medicine too soon or begin even to doubt that he was ever diseased. As dissimilar as is the severity of a light and a severe chancre, the severity of the secondary symptoms vary still more. While in some cases a patient may be prostrated under it in a few short weeks, in others the disease appears to have stopped with the healing of the chancre. While I am not prepared to go so far as those who state that 10 per cent. of all syphilitics, never know they have it, still I believe that there are some of this class.

Against it we have but negative proof, which is as good as none. All of you have seen cases of secondary syphilis in which the symptoms were so slight, that had the patient not been prepared for them by you during the primary stage they would very readily have escaped attention. Again which of you has not seen a patient come to you covered with an eruption who remembered nothing of his chancre beyond a "little torn place that healed up all right," can you not imagine these two extremes united? Accident has led me to see a few of these cases and they have much impressed me. Patients sometimes come to you who with the best intentions are unable to give you any rational history about a late syphilitic lesion that stares you in the face. And this is not unreasonable! The evolution of this disease is so slow, its symptoms so diverse and often so slight, its period of latency so long and outbreaks consequently so far apart, that the average non-medical mind cannot connect them. It is for this reason then, mainly, that in the secondary stage that the

physical diagnosis is so important. In proceeding to the stage of *general eruption* and lesions it is impossible in a paper like this to give any description of them, so I will but refer in a general way to them. Moreover, their diagnosis can never be learned from print or plates, but solely by a close clinical study. In the physical diagnosis of secondary syphilis then, Gentlemen, we must, in all ordinary cases strip our patient entire. The lack of inflammatory character and sensibility in the ordinary syphilitic eruption is one of its most distinctive traits and isolated patches of the more superficial forms of eruption are frequently found entirely unknown to the patient. Especially is this true of the regions lying over the spine of the scapula, the clavicles and the large superficial articulations. While the eruptions are naturally the things that will first call for your attention, their place in the pathological scale, is by no means first. The glandular enlargements form the symptoms of most real importance. In passing the hand along the outer border of the "ligamantum nechæ" from below upwards we will find in the ordinary acute syphilitic several hard and slightly enlarged glands varying in size from a pea to an almond. These are usually found on either side. The glands, however, that are of any great diagnostic value all lie above the level of the back hair, usually too, just at the insertion of the nucha. If you will take the trouble to examine you will find one or more of the lower cervical, and even the post aural glands, enlarged in at least 10 per cent. of all non-syphilitic adolescents, so that these while often confirmatory are not of much importance. The next, and by some of our German friends the first, in importance lie upon either side of the elbow-joint. The most important (by some pathognomonic) lie "between the biceps and triceps muscles just above the internal condyle of the humerus." The outer and usually the smaller (and I believe the most constant when there is no eruption on the forearm) may often be found an inch or even more above the joint. If the chancre be extra-genital the inguinal glands are nearly always complicated in the secondary enlargements.

Passing from the flexures with their engorged glands we next take up a train of symptoms dependent upon a specific affection of the periosteal coverings of the superficial bones. The sternum and the tibiæ bones are the ones most affected, with the bone of the forearm and the clavicle making a second form. Pressure upon

these bones, during the acute stage of syphilis, will almost certainly cause the patient to flinch. The upper and lower portion of the sternum and the upper part of the tibiæ, appear to be the especial points of tenderness. These bone symptoms, however, are at best rare and uncertain in their appearance, when well marked only are they conclusive. If we would continue our search we should pass our finger through the patient's hair and we will no doubt find it with a rough, crisp, feel and an unusual quantity will come out in our fingers. This will be the more marked low down on the temples, a place moreover where we rarely see the seasonal changes or senile alopecia, amount to much. By drawing out hair over the head it is not unusual to find scabs sticking to the hair roots. Acne capilitis is one of the commonest of symptoms at this stage and we need no better proof of it than this. The dandruff in the head during early syphilis is frequently enormous and it is common to find the scalp of the specific "coppery" tint under the removed scurf. The mouth, the anus and the preputial cul-de-sac all in turn require our inspection. In the mouth we will see upon a close inspection, no doubt, many morbid changes. The tongue is coated and oftentimes very foul. The mucous membrane is glazed and shining. The part of the mucous tract, that usually calls our attention first in the throat proper. We will nearly always find the uvula of a dark inflamed red and this hyperæmia often extends to both pillows of the fauces. This is the simplest sore throat of syphilis. Quite as commonly do we see the whole faucial orifice festooned around its edges with the specific mucous papule or commonly "mucous patch." In well marked cases their number is quite large, covering all the buccal and faucial surfaces exposed to view. They are commonly found in every stage, from the pale bluish white elevation, to the already denuded surface of a raw coppery red, still more rarely do we find these eroded surfaces ulcerating. This erythema as well as the better developed "mucous tubercle," may cover the whole mucous membrane, soft palate, tonsils, tongue, lips, &c., &c. All may be affected, and all at the same time. When the large patches coalesce they are covered with fissures and seams. Especially is this true in the corners of the mouth.

Upon examining the scrotum of an early male syphilitic we will sometimes find a hard lump the size of a chesnut, capping the upper end of the testicle, this tumor is painless upon pressure but sometimes

darting pains occur in it spontaneously. It is put down as very rare, but I think it often overlooked still it is not common.

I will now return to the subject of syphilitic eruptions. There are certain syphilitic eruptions which without the grossest ignorance cannot be mistaken for anything else and again there are many indistinguishable from the non-specific eruption of the same type. The later secondary lesions are in themselves the most typical, though by reason of the presence of concomitant symptoms the roseola and papular, eruption of early syphilis, are of most practical importance. in a diagnosis. The especial features of importance in syphilitic eruptions are their color, their symmetry,their polymorphism, and we might say, their points of selection. The so-called "coppery" color of fully developed syphilitic eruptions is one of their most striking features, and with the other specific elements present, is conclusive. It is absent, however, to a great extent in blondes and may be found on certain non-specific eruptions of the lower extremities. The symmetry of these eruptions is very striking. Where they are found on one side of the body, you will almost invariably find them on the corresponding side to a greater or less degree. This is often important. In those cases where you find a symmetrical form in what are usually local affections, you must inquire more fully into the history, viz. : herpes zoster, onychia, &c. The polymorphism of syphilis consists in the various elementary forms found in a given eruption. We rarely see a roseola that is not intermixed with a greater or less number of papules or even of vesicles and tubercles. The points of selection of syphilis is one of its most striking features. The "corona veneris" is striking enough, but we have others of far more diagnostic value. A palmer psoriasis (and planter) especially if symmetrical, is always syphilitic, an erythema of the scalp is even more so, an acne of the lower extremities is suspicious, &c., &c.

I have before alluded to the subjective symptoms, but they are so diverse that we can give nothing more than an outline of the more common symptoms. In the acute secondary stages a man may or may not be run down in general health. The amount of the eruption bears no relation to the amount of constitutional derangement. The type does.

Rarely, if ever, is there any subjective symptom connected with the eruption itself, no pain and no itching. During this stage the

marked anemia may give rise to numerous neuralgias and rheumatoid pains. These are not to be mistaken for the periosteal pains which occur often at the same time. The latter affecting by preferment the more superficial bones of the skull, tibia, forearm, sternum, fingers, &c., is mainly nocturnal. The headache it occasions is the most common symptom and is often severe. The headache of this kind yields with such certainty to a pushed mercurial (calomel gr. 1-40th every hour) that we may use this to diagnosticate it. Sometimes with the outbreak of the eruption or before, we have a noticeable rise in temperature which is called "syphilitic fever." I can hardly believe it is as common as is often stated, certainly in this State it is very rare.

I believe I have now touched upon all the *practical* features of the acute secondary period. But even at this stage the variety of manifestation are so numerous that a work of many times this size could not even enumerate them.

Beyond the acute secondary stages, we come to a period in which it require skill, acumen and much clinical experience, to diagnose a case that has gone this far undetected. The difficulties are often almost insuparable and this is more to be regretted from the fact, that any manifestations at all in the later stages are ominus. The late secondary, the so-called intermediate and the tertiary, are alike in a diagnostic point of view. While they may be, of decidedly marked specific origin, they may give rise to trouble, functional or otherwise, that have nothing characteristic about them. The physical diagnosis at this time may reveal the eruptions peculiar to this period, in which case they are usually isolated, but are to the experienced eye or much, if not more, characteristic than the earlier. The late eruptions present the segmented form often alluded to much more than the others, and present, as a rule, the thick, greenish, concentric scabs which are almost pathognomonic.* It is in the cases where all objective symptoms have ceased, and when the patient if he ever knew it, has long forgotten the existence of his old foe, that we have the real difficulties arise. Cachexia, perverted functions, vague neuroses and paralyses, take the place of the outward manifestations and unmolested undermine the vital functions.

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*The subjective symptoms of this stage are essentially the same as in the later secondary stages, viz.: pain in the head often severe and localized, pains in the long bones and articulations. At this stage the pains are *invariably* worse at night.

I must here state that as sad as it may appear there is one symptom which runs through the whole evolution of the disease. This symptom is *lying*. Without regard to his social, moral, or any other surrounding, the patient usually presents this feature as a symptom at some time. It may be a matter of life or death with him and he knows it, but no matter, he will stick it out and die true to the code of syphilitics. In these cases it is, that the physical diagnosis is of most use. There are some cases unmarked but many are, and to their dying day will show the marks of these old outbreaks. In suspected cases examine for indurated glands, perforated palate, nodes and exostoses. Look carefully at all old scars, anal cicatrices, &c. If possible send him to an ophthalmic expert for an examination for evidences of old retinal changes, adherent iris, &c., &c. In fact, I know of no case where a man's "detective" qualities may be exercised to better advantage than in these cases of suspected syphilis. The scars of syphilis are usually characteristic not only in their appearance but in their location. The cicatrix is "rounded depressed, thin, non-adherent, smooth," and is often stained by the remaining pigmentary deposit. This pigmentation remains a long time, on the longest, and when it clears it clears from the centre outwards. Often the scars are white with a ring of pigment around them. Look in the hair for bald spots and scars. Having seen one case in which it was very successful, I would also advise you to get up the old bottles from the medicine chest and look up the prescription. In the case to which I allude, the patient became suddenly insane, a raving maniac, having epileptiform convulsions. This circumstance was suspicious, but being a married man, with an apparently healthy family, and man of high moral and social standing it did not look reasonable. The physician in attendance wisely said nothing but managed to procure some of the old bottles. By reference to them he found nothing, but one was from a druggist in a distant city and the mail brought back the solutions. Under judicious treatment the gentleman recovered almost entirely, and to this day neither he nor his family know the cause of his trouble. He never connects his trouble *ten* years before, with the present. I cite this instance of what may be done and to warn you against an error into which we are likely to fall. Do not take any serious present walk and conversation, as a standard by which to judge his younger days. Nor should we forget, that while often used to

shield the offender, "mediate contagion" does sometimes bring this disease into the "high places" and leaves no man above suspicion. In these cases, for the sake of all parties, it is better to say nothing, but apply the touchstone of anti-syphilitic treatment. And now, Gentlemen, in conclusion, you can find no class of medical work that will bring you as little pecuniary reward as this, and you all well know the ingratitude of the average syphilitic. Still, in spite of this and the loathsome associations of the disease there is no disease which, in my humble opinion, affords as much satisfaction in its study. The pleasure derived in guiding its tortuous and treacherous course is great to any man who takes a joy in watching the result of his work, and with so ample an armamentarium of therapeutical ordinance at our command, we have only to get the range. "Be sure you are right and *then* go ahead."

# ANTISEPTIC MEDICINE AND SURGERY.

Read before the Medical Society of North Carolina, at Tarborough, N. C., May, 1883.

By S. S. Satchwell, A.M., M.D., of Pender County, N. C.

## THE PROGRESS OF ANTISEPTIC TREATMENT.

*Mr. President and Gentlemen of the Medical Society of North Carolina:*

In order to clearness, as we proceed, let us define, in the beginning, the *meaning* of antiseptic treatment. It is one or both of two things. *It is either the prevention of some injurious, or poisonous, or septic agent getting into the system from without, or it is the modification, or limitation, or destruction of such an agent already in the system by means not hurtful or poisonous to the body.*

The object of antiseptic surgery is to prevent the access of septic poison or infective organisms from without, and has more especial reference to the treatment of wounds, operations, etc. The object of antiseptic medicine is to arrest or destroy poisonous or infective agents or organisms which are at work within. So that the treatment of the one is not strictly analogous or parallel to that of the other. The septic and infective origin of disease is *no new doctrine.* Increasing in importance, it has reached a scientific foundation. That decomposing animal and vegetable products, arising from without, or coming from within, the human system, originate septic and infective elements and influences, is undisputed. The entire family of zymotic diseases are involved in causes which excite the liveliest enquiry. The nature of the origin of our autumnal or miasmatic diseases remains shrouded in uncertainty. That they are caused by a poison emanating from the combined action of heat, moisture and vegetable decomposition, is one of those facts in medical science and of popular belief and experience that gains strength with the rolling years. It was thought by many that the philosopher's stone in this important relation had been found when, a few years since, the experiments of Klebs and Tomasi-Crudeli, around Rome, caused them to announce the discovery of a *Bacillus Malariæ* as the cause of malarial or paludal fevers.

But the evidence upon which their conclusions are founded is not sustained by the subsequent experiments of others. George M. Sternberg, Surgeon United States Army, who was detailed for experimental investigations relating to the etiology of malarial fevers, made elaborate investigations in this line, but was unable to confirm the conclusions of Klebs and Tomasi-Crudeli. He unites with others, however, in the belief that experiments founded on the resources of modern science will yet lead to the discovery of the true nature of malarial poison. But, dismissing this special poison, whether septic influences originate from running wounds, suppurating abscesses, putrid effusions or exhalations from the body, or whether they float about in the air to find location upon wounds, they make up one of those absorbing questions in medicine and surgery, as well as in sanitary science and preventive measures, that have made a comparatively new field for enquiry and discussion. The word infection, as defined by Burdon Sanderson, implies "an inflammatory condition, which, spreading beyond the primary operations of its cause, induces a similar condition in other parts and disorders the vital functions of the whole body." But to what extent this infection comes from inflammation, or putrefaction, or to action productive of putrifying discharges, or to what extent living organisms, originating within or without the system are poisonous, it cannot be controverted that, under the lights of these enquiries, we are emerging from much of the darkness and uncertainty of the past. If the system is susceptible to these septic agents and noxious influences, is it not also susceptible to the action of antiseptic agents and remedies? Is it not possible to satisfy the indications for treatment of septic conditions and for the prevention of their origin and spread? If so, can we apply such antiseptics to wounds, injuries, putrefaction and suppurative parts, and can we, through the agency of respired air and other avenues, reach, arrest or destroy minute organisms in the lungs and other organs? The triumphs of the past give assurances to the future in these important relations of antiseptic methods and medicines in the treatment and prevention of disease. We are surely advancing upon this line, and have already reached a foothold. We have secured a valuable principle and a firm rallying point.

Professor Joseph Lister is claimed to be the pioneer and leader in antiseptic surgery, and its main acknowledged champion on both sides of the Atlantic. So much has he impressed himself upon the surgical world, that his methods are known as "Listerism." His theory seems to be mainly founded upon the idea of the renowned Pasteur, of Paris, that putrefaction is caused by the presence of microscopic germs. Lister, as is well known, holds that putrefaction disturbs and obstructs the process of normal repair of wounds. Hence he argues that their frequent complications—erysipelas, pyæmia and septicæmia, may be avoided in proportion as putrefactive germs are not allowed to enter therein. Lister and his disciples claim that this can be done, and is done, by the application to fresh wounds and abscesses of antiseptics, carbolic acid, iodoform and other antiseptics, with the spray and drainage tube, are now everywhere used with impunity on both sides of the ocean, as we all know, in the major and minor amputations and operations and in wounds calling for surgical interference. They combine, with other means, to make up the subsequent dressings and after management of blood-poisoning, and the treatment has made many friends and much progress, although its strongest opponents claim that Listerism is dead. They assert that in wounds and operations involving important parts and large joints, recoveries under Listerian methods, with reparation of injury and retention of function, are common; whereas, under the more ordinary methods, previously relied on, success was only exceptional. Listerism cuts freely into joints, pus cavities and lumbar abscesses under the application of antiseptics. It claims to have pioneered the way to the great modern triumphs of abdominal section and peritoneal surgery. With drainage tubes to prevent putrid accumulations, not only is blood-poisoning prevented—other antiseptic measures aiding—but the treatment claims to open now with impunity into the largest joints and to save limb, as well as to retain free motion. The great French surgeon, Chassaignac, was the first to originate and practice the principle—now everywhere acknowledged to be valuable—of drainage in general surgery. He was the bold and able surgeon to first designate the source and danger of septicæmia and pyæmia. His was the inventive genius to discover

and apply a preventive in his celebrated drainage tube. The author of this paper preserves a vivid recollection of the eloquence with which he enforced his precepts and instrument upon the attention of the admiring crowds who followed him, as did this writer, in 1860, through the wards of the celebrated Parisian Hospital Lariboisiere. The lessons in this line of this great master were of great service to me during my administration of the large military hospital at Wilson, in this State, while the late war was going on. Any reputation gained by that hospital for cleanliness, ventilation and success, especially in the treatment of gun-shot wounds and injuries of large joints, was greatly due to the application of the teachings of this renowned operator. To no one are these facts better known than to our fellow-member, Dr. John McDonald, who, as one of the assistants of that military institution, was known as its surgical genius. It was the faith of Chassaignac in the antiseptic principle which caused him, before Lister came forth with his announcement, to enter fearlessly into the largest joints, covered with unbroken integument, with his drainage tube, and thus to avoid that septic contamination which had previously carried millions to premature graves. Recoveries from lumbar and psoas abscesses and other degenerations, when death seemed inevitable, are claimed as conquests of antiseptic treatment. Those who do not follow its teachings contend that as good results are obtained by other means, if used with the same care and attention to details which antiseptic surgeons employ. They assert that the system of isolation, cleanliness, ventilation, prior preparation of patients for operations and sanitary appliances, will be attended with as much success. Listerism claims that its treatment not only prevents pus formation in recent wounds and injuries, but arrests it in old and dangerous ones, and in large and critical abscesses, and thus averts blood-poisoning, but that it is effective in the consolidation of the walls of cavities and abscesses. They assure us that these and other benefits derived from antiseptic surgery save daily many lives that would be lost under other measures of treatment. But even if Listerism has only served to awaken more attention to the necessity of early and constant removal of septic productions in cavities of wounds, and of more careful surgery, and hygienic conditions and surroundings,

its achievements have been immensely beneficial. The literature of the subject proves this, and, by a large and telling record of facts and cases illustrative of the advantages of antiseptic surgery, that its methods are attended with greater success than is ordinarily attained under other methods. It is certainly a material begging of the question to see opposition to Listerism reduced down to the point of attacking the spray and carbolic acid because two or three deaths from its poisoning have resulted among the multitudes of successful cases treated where that remedy was used. It is held that in efforts to prevent local poison we are liable to too much indifference to constitutional infection. Erichson fears that this is the tendency of the modern methods of treating wounds. Some eight or ten years ago he stated that grave surgical operations were less satisfactory than they should be. He is now probably ready to modify that remark. Owing to the improvements, even in that short time, in more careful attention to sanitary conditions, including observance of antiseptic precautions, during and after operations, there has been a decided diminution in the deaths from operations. That the diminished death rate could be still further reduced, in private practice as well as in hospitals, is a legitimate deduction from the progress of the science and art of surgery. Operations demanding abdominal section, especially the brilliant success now attending operations of ovariotomy, have greatly diminished in fatality. This is materially owing to improved surgical procedures, better preparation of patients for operations, combined with the use of antiseptic measures and improved hygiene. The friends of antiseptic surgery are among the foremost in the admission that in wounds and injuries requiring amputation success depends no little upon a favorable state of the blood, calling for an efficient discharge of the blood-making and blood-purifying functions. They admit the importance of good digestion. They give due importance to pure air, good water, suitable food, cleanliness and to an adjustment of the system to that abstinence from exercise and improper positions of the body, imposed by the restraints of the sick room. Judicious surgery declares that the result of wounds and injuries is sometimes influenced more by conditions pertaining to the patient which precedes, than by those that follow

them. Paget significantly remarks that "the majority of the preventable calamities of surgery are due to the oversight of personal defects in the patients operated on—defects in the habits, the constitution, or the previous diseases which ought to have been ascertained before the risk of the operation was incurred."

Let it be repeated that the friends of Listerism claim to an adherence to these facts and to these sanitary rules and hygienic conditions in their claims of superiority and better success. They agree with others in the estimate that, whether operations are more successful in private practice or in hospitals has not been so definitely settled after all. It depends, of course, largely upon the character of the cases treated, upon sanitary conditions and other controlling circumstances. John Simon, an expert in sanitation, as well as of great experience in private practice and hospitals, declares "that which makes the healthiest house makes the healthiest hospital—the same fastidious and universal cleanliness, the same never-ceasing vigilance against the thousand forms in which dirt may appear and disguise itself in air, and soil, and water, in walls, and floors, and ceilings, in dress and bedding, and furniture, in pots and pans, and pails, in sinks, and drains, and dust-bins. It is but the same principle of management, but with immeasurably greater vigilance and skill, for the establishment which has to be kept in such exquisite perfection of cleanliness is an establishment which never rests from fouling itself. Nor are there any products of its fouling—not even the least odorous of such products—which ought not to be regarded as poisons. Above all, this applies to the fouling of the air within hospital wards by exhalations from the persons of the sick, so that for hospital hygiene ventilation requires pre-eminent regard." These views, while correct, are but an indirect endorsement of the necessity of antiseptic measures to arrest and destroy septic conditions and complications that attend upon sickness in hospitals or the private walks of life. They are sustained by the testimony of Drs. Bristowe and Holmes, who, under the direction of the Privy Council, made, in 1864, a laborious investigation into the sanitary condition of the hospitals of the United Kingdom and also of Paris. They reported that "whenever surgical diseases presenting open sores

are received, hospital diseases, such as erysipelas, pyæmia and phagadæna are likely to arise. The liability of these affections to originate and to spread is considerably influenced by concentration of traumatic atmosphere, but their development and spread are both chiefly dependent on want of cleanliness, bad drainage, over-crowding, defective ventilation, and the like They go on to say, what all now concede, that the conditions of hospitals themselves have more to do with the health of hospitals than of any conditions of outside air, location, soil, form, size, etc. Buildings for the sick, by careful regard to these conditions, may be rendered comparatively healthy, whereas, those are unhealthy, though built on the most approved plans and upon good sites, when these conditions are neglected. As the majority of inmates of city hospitals are of the poorer classes, many of whom have, before admission, been under the depressing influence of wasting sickness, the remark is almost needless that the death rate is higher in such institutions than among the more hardy residents of the country and small towns.

In relation to the septic conditions and infectious influences named, it may be asked, in the face of the evidence and of the growing importance attached to the germ theory and to minute organisms in the production of causes that are effective in the origin and spread of disease, whether there is not ample reason for the increasing sentiment in the profession of the importance and value of antiseptic treatment? Where the poison is the antidote ought to go. The means of its arrest or destruction should be directed to the sources and places of its origin and to the prevention of its propagation. The difficulties in the way of avoiding septic complications have had much to do in originating and increasing antiseptic methods. The friends of this system contend that under the old methods there can be no positive certainty that septic germs have been excluded, even when the best hygienic conditions have been maintained. They teach that wherever putrefaction exists, there open wounds are exposed to such septic poison as produce pyæmia and septicæmia. It is an inference from lectures on inflammation delivered by Burdon Sanderson before the Royal College of Physicians, and recently published, that septic bacteria or their

germs, in a viable state, are *not necessarily* phlogogenic. He says that, "although neither the exudation products of a normal inflammation alone, nor septic organisms alone, are infective, the association of these two conditions is always so; in other words, that exudation fluids which are infective owe that property to the chemical changes which septic ferments determine in them, and conversely, that septic organisms which are infective owe their infectiveness to the exudative soil in which they are grown." "Thus the presence," says he, "of septic organisms (provided they have not been bred inside the body) is not necessarily attended with danger, but they become sources of great danger when they are brought into relations with devitalized organs, or with extravasated serous liquids of any kind, and particularly with inflammatory exudation." He goes on to say that experiments demonstrate the truth "that after an injection of a liquid charged with bacteria into the peritoneal cavity, the lymphatics leading from the peritoneum swarm with these organisms; also these abound in the blood. If the animal is killed, say ten days or a fortnight after the injection, yellowish or opaque deposits are found here and there in the internal organs, particularly in the lungs, liver and kidneys, which have been conveyed by the blood-stream to the places in which they are formed. If, instead of charging the circulation with harmless bacteria grown outside of the body, you produce an acute peritonitis, the effect is the same mechanically, but pathologically very different. In both cases the peritoneum contains liquid charged with septic organisms, which in both cases are carried by the lymphatics into the blood-stream; but in one case they enter the circulation, incapable of doing any harm except such as may result from the plugging of the capillary arterioles; in the other they carry with them an infective virus, by virtue of which, wherever they lodge, they become the starting point of infective abscesses" That accomplished and able gentleman, the President of the National Board of Health, Dr. J. L. Cabell, of the University of Virginia, stated last year, in a public address, that "the demonstrated acquisition of virulent properties by septic bacteria, from the exudation soil in which they may be made to grow, is in beautiful accord with the more recent observations of Pasteur, Sternberg and H. C. Wood, of

Philadelphia, in respect of other noxious bacterial organisms and micrococci; so that the influence of the soil in which these organisms grow has now become a well established principle of wide application." "It is to be hoped," says he, "that the lucid exposition by Burdon Sanderson of principles clearly and necessarily deducible from carefully conducted experiments, will finally settle all disputes as to the role of septic micro organisms in the production of septicæmia and pyæmia. On the one hand they refute the extravagant doctrine distinctly enunciated by Professor Heuter, that inflammation is impossible without the agency of morbific germs, and that consequently the most severe injuries can be inflicted without producing inflammation if germs be excluded; on the other hand, they indicate the absurd unreasonableness of those who obstinately maintain, in the face of all the experimental investigations relating to the subject during the last few years, that these organisms are without pathological significance. If they are present in every intensely infective inflammation, we may be sure that they stand in important relation to the morbid process." Dr. Cabell cannot agree with Mr. Savory, "that for the prevention or removal of either or both of the two factors in the production of the infective virus free ablution with clean water is the simplest, safest and best of antiseptics. Simple, of course, it always is. Safe, it may often be, when the situation of the wound and its form admit of perfect irrigation without retention of fluid in any of its recesses; but, under other circumstances, it cannot be safe, and therefore cannot be the best of antiseptics, or even a moderately good one. For Burdon Sanderson has shown that water, whether contaminated with septic organisms or not, may be introduced into the peritoneum in limited quantity without effect. Experiment shows that water cooled, after boiling, and introduced in larger quantity, with antiseptic precaution, the quantity being so large that it cannot be rapidly absorbed, produces an entirely different result. Under such a condition the water accumulates in the serous cavity, becomes charged, first, with the salts by diffusion; subsequently with the proteids of the blood in increasing proportion; and thus becomes a most favorable soil for the development of septic organisms, which, in their turn, act infectively on the blood-vessels and living

tissues with which they come in contact. And thus even Mr. Savory's "clean water," if allowed to settle in any of the recesses of a wound, unless it be promptly absorbed, will become a source of positive danger by becoming charged with the exosmond salts and albumenoids of the blood, and thereby creating a good soil for the development of infective organisms. When the position and form of the wound are such, therefore, as not to admit of effectual drainage, an additional protection may be derived from the use of special antiseptics, applied for the destruction of all germs which may be in contact with the injured tissues and the subsequent exclusion of all others. The precise details of Lister's dressings are not necessary for the establishment of this principle. The use of either the spray or of carbolic acid, however important sometimes, is not a *sine qua non* of the principle. Esmarch has recently stated that, by the use of pads soaked in absolute alcohol, fixed to the wound by an iodoform bandage, with some less important accessories, he had obtained the most satisfactory results, but of three hundred and ninety-eight major amputations there were only six deaths, 1.5 per cent., and none of them from septic complications. Of the cures 85 per cent. healed by the first intention with one dressing. In the other 15 per cent. the dressing was renewed. Of fifty-one major amputations only two died—one from shock and hemorrhage, and one from delirium tremens. Similar treatment is on the increase in this country, both in private practice and in hospitals, and the reports seem to be favorable. It was reported by Mr. William McCormac, in December, 1879, that of forty-five operations in hospital for the division of various bones, in order to remove deformity—among the most dangerous kinds of operations, especially when, as in thirty of the number, the knee-joint was involved in the operation—every one of this considerable series recovered in the speediest, easiest and safest manner possible, under antiseptic precautions, and in every one of the thirty in which the knee-joint was opened a freely movable articulation resulted. On the other hand, of fifty-four cases, during the previous six years, not treated antiseptically, and from which all cases involving injury to the joints were excluded, twelve died, of which four were from pyæmia and four from erysipelas. There were also other cases

of erysipelas which recovered after long illness. Volkman's experience has been precisely similar.

It is urged against Mr. Lister that he does not publish his statistics. This he denies. In his defence, stating that he had only one case of pyæmia in five years in a hospital in Edinburg, where he had under his care an average of sixty patients, he gives the following statistics: Seventy-two cases of injuries and only four deaths, or 5.5 per cent. as against 7.47 per cent. in St. Bartholomew's Hospital, as reported by Mr. Savory, with some exultation. In eight hundred and forty-five operations he performed, there were thirty-seven deaths, or 4.39 per cent. Of these seven hundred and twenty-five were major operations, giving thirty-seven deaths, or 5.10 per cent. as against 5.87 at St. Bartholomew. He contends that even a blood-clot, however large, and exposed in an open wound, may remain, under strict antiseptic treatment, not alone free from putrefaction, but without the formation of a single drop of pus. He claims this as a new principle of surgery. Mr. Watson Cheyne, Surgical Register in King's College Hospital, and long associated with Mr. Lister, selected as tests of antiseptic treatment the cases treated in Lister's hospital practice between September, 1871, and November, 1879. In these cases were many healthy joints opened by incision or accident, and remaining so for several days. In making up a statistical table of these cases in 1879, Mr. Cheyne stated that the spray, over which there has been so much contention, was the least important of the various antiseptic means, and that Mr. Lister so regarded it. Also that it can be the most easily dispensed with, for the reason that fewer organisms are found floating about in the air than can be found on any instrument with water or dust on it. Mr. Lister has used his antiseptic treatment for years without the spray. Mr. Keith's condemnation of this portion of the antiseptic system at the International Medical Congress, in 1881, at London, was very naturally followed by the admission of Mr. Lister that he was ready to abandon it, and had abandoned it. There ought not, therefore, to have been so much surprise felt and expressed at that controversy over Listerism because of these admissions of Mr. Lister on that interesting occasion.

Our able representative from North Carolina, Dr. N. J. Pittman, of this town, who honored this Society as its delegate to that Congress, has told us in his interesting report of last year, that he, too, was surprised at Mr. Lister's concessions. Mr. Nathan Cheyne, the author of many able articles published in medical journals in favor of antiseptic methods, has more recently published a valuable addition on antiseptic surgery, its principles, practice, history and results. The *British Medical Journal* of the 29th of November, 1879, contains a very instructive report of the results of the antiseptic treatment in Mr. Lister's hands As intimated in the early part of this paper, it is stated by good authority that Mr. Lister has opened large abscesses in connection with disease of the vertebræ, and with careful antiseptic means not a single drop of pus appearing. Dr. Stephen Smith, of New York, bears similar testimony in regard to this class of abscesses. He says that their treatment by other methods has been a failure and the reproach of surgery. Sir James Paget said, about three or four years ago, that he had never seen a patient recover who had lumbar abscess opened by free incision. "Now," he adds, "I have seen several opened with absolute impunity under antiseptic treatment." It is his opinion that this treatment is essential to the cure of certain groups of cases. He compliments Mr. Lister by saying that he has done far more than any one else in reaching the great reduction of mortality after operations. The celebrated Spencer Wells testifies to the great value of antiseptic treatment. Even before Mr. Lister had tried it he had insisted upon every possible precaution for the protection of patients, before, during and after operations. He claims to have taken, thus early, very great pains against the risk of any contagious or infective disease being communicated to a patient, and was vigilant to prevent any entrance from without, or the development from within, of any and every cause that was capable of setting up traumatic fever or of originating blood-poisoning. Mr. Knowsley Thornton bears corroborating testimony from his experience in the Samaritan free hospital. Like others, he is convinced that the want of success which sometimes follows the application of Listerism can, with propriety, be generally ascribed to imperfect knowledge of its

teachings, and therefore to failure in applying the treatment. He says that its use, by himself, has enabled him to reduce his rate of mortality in ovariotomy from 23.94 per cent. to 4 per cent. Mr. Granville Bantock, surgeon to the same hospital, takes a different view, and argues that by a dilution of the spray and solution the whole question is reduced to one of cleanliness, and believes, as others do, that cleanliness is, after all, the secret and merit of Listerism. Mr. Keith, so denunciatory of the spray in the International Medical Congress of 1881, although he had used it successfully in eighty cases, but lost two of them by carbolic acid poisoning, had previously, in the *British Medical Journal* of October, 1878, borne testimony in behalf of antiseptic methods. He then said that the practice lessened mortality—that earlier operations could be recommended by it—that drainage might in some measure be superseded—that convalescence was easier—and that it gave comfort to the operator. Many of the ablest surgeons of our country, North and South, among them Drs. Walter F. Atlee, of Philadelphia, John L. Atlee, of Lancaster, H. R. Storer, of Boston, are no advocates of Lister's treatment and do not use it. They unite with numerous others of our best and most experienced surgeons in preferring other methods. Of course these facts and dissenting views are significant. They at least show the advanced state and improved success of the science and art of surgery without Listerian remedies. But when it is contended, as was contended in the International Medical Congress of 1881, that Listerism is a failure—that it is one of those brilliant meteors that flash athwart the medical sky, and then disappear forever, like the bubble upon the water, or the foam upon the sea—it is certainly singular and surprising. It surely becomes us to weigh the evidence on both sides. It is sensible and a high duty to follow facts, instead of theory and prejudice—to go with reason, judgment, truth, science and experience, and not to seek to bend these lights to the support of theory and pride of opinion. That a large number of those who oppose Listerism have never investigated its claims or given it a fair trial, is well known; that many who assail it as dead would be glad to attend its funeral is very evident; but neither the indifference of some, nor the opposition of others, convince a very large number of

the most enlightened members of the profession that it is either a failure or that it ought to be opposed. They hold that modern progress teaches more and more the importance and necessity of using every available means for resisting the development of septic conditions. That the antiseptic precautions and measures of Lister avail to these ends, the experience of a large portion of the profession testifies. Men of undoubted skill and character—Spencer Wells, Dr. Goodel, Dr. Homans, and numbers of others of the finest genius and skill in our ranks bear evidence that operations, under precisely the same conditions in every other respect, exhibit a striking difference in favor of the antiseptic cases. To such authorities as named add the names of Paget, Thornton, Cheyne and of those of like reputation in France, Germany and the United States, who support this view. In the number of the *British Medical Journal* of December 6th 1879, may be found a full report of a discussion at St. Thomas' Hospital at a meeting of the South London District of the Metropolitan Counties' Branch Association. In this interesting discussion a number of eminent surgeons participated. Mr. William McCormac made a most triumphant defence of antiseptic treatment, while he exhibited, in glowing colors, the disasters consequent on a failure to resort to it. The subject is continued in very interesting details in the two succeeding numbers of the same journal. They have lost none of their value from the lapse of three or four years. True, the distinguished Lawson, who has operated hundreds of times for abdominal section, has taken up, with Thomas Keith and others, the cudgels against Listerism. Dr. Baulock, Dr. Savage and others of note, on both sides of the Atlantic, are with them. But these high authorities and the backset it received at the International Medical Congress of 1881, have not convinced the medical world that Listerism is a delusion and a snare. Any superstructure that has loomed with so much prominence during the last ten or twelve years cannot be swept away by the breath of passion and prejudice or the momentary waves of unreasonable opposition. That it has not proved all which its most ardent friends claim is probable. Every important addition made in medicine and surgery have had ups and downs in medical favor before finally resting on a scientific basis.

The brilliant achievements in abdominal section and peritoneal surgery are not free from the favorable progress of antiseptic treatment. Its suggestive teachings and methods have aided the modern pioneers in this comparatively new field of professional triumphs. All agree now on the established doctrine that in these operative procedures not only must hemorrhage be controlled by pressure, ligature, etc., but that the whole peritoneal cavity must be thoroughly cleaned after operations and before closing the abdominal incision. Our ablest ovariotomists and best surgeons not only do this—not only, in addition, embrace the divided edges of the peritoneum in the sutures that close the abdominal section in order to prevent raw surfaces, adhesions and deposits, but they take the antiseptic precautions of cleanliness, drainage, etc., and in this way avoid septic conditions that were not appreciated before the brilliant results of Listerism. Dr. J. Marion Sims says the reason Spencer Wells, Thornton and others do not use the drainage tube is because of a belief that Listerism otherwise renders the peritoneal effusion asceptic, and hence that its absorption is unattended with danger. Dr. Sims doubts this. In his own great experience, and that of others, he states that it has often been the case after these procedures that an accidental discharge of bloody serum through the external wound was followed by prompt relief of dangerous symptoms and an early cure. It is his opinion that even now, under the best antiseptic precautions, such cases are occasionally met with. The modern improvements in general peritoneal surgery over past failures cannot ignore the claims of Listerian methods in contributing to the splendid results in operations upon the spleen, kidneys, stomach, bowels, bladder, etc., as well as for ovariotomy. Lawson Tait, who has accomplished so much in the new field of abdominal surgery, owes something, doubtless, to Lister, in a more scrupulous regard for cleanliness, cleaning out cavities thoroughly, etc. However this may be, is it not reasonable to conclude that something is due to Lister for the impunity with which surgeons now cut down every day upon, and enter the peritoneal cavity, find wounds, injuries and lesions, pare the edges of wounds of the stomach, intestines and other internal structures, bring them together with sutures, extract the kidneys, and perform other

operations upon internal structures and organs? We all know that most of these operations are of recent years, and that success, especially when antiseptic precautions are observed, frequently follows. Effusions of bloody serum and putrid fluids into the abdominal cavity, with no means of escape, causing septicæmia or pyæmia, that was not regarded, even if understood, by our predecessors, did much of the work of death. It was *blood-poisoning* that killed, and not simply *peritoneal inflammation*, as was so generally supposed. If Listerism has had no influence in the production of these needed reforms and changes in treatment, a large number of our best informed and most progressive men are strangely mistaken.

But antiseptic treatment is not confined to the domain of surgery. Antiseptic medicine assumes a more commanding position in the widening field of enquiry into the causes of diseases and their treatment. It has become invested with new interest because of the increased stimulus to medical thought by researches in the absorbing question of germs and the different modes of development and action of bacteria, bacilli and micrococci. The achievements of the passing years in this attractive field of medical enquiry are significant. They are giving new life and more importance to the question in health which enquires how and why it is that our living bodies are suitable breeding grounds for morbific causes and infectious influences. But why, under the operation of the same causes and precisely the same circumstances and surroundings, some are stricken down while others escape, remains yet to be accounted for. The hypothesis that different individuals have different powers of resistance, must continue as a doubtful consolation until progress throws more satisfactory light on the subject. It is doubtless true that at every breath and at every step we are liable to the introduction into our systems of minute particles and living organisms which so operate against functional action as to decrease our powers of vital resistance to these agents. The importance of finding such preventive remedies and using such precautions, in the way of antiseptics, as will most effectually arrest or destroy all such causes and conditions, is manifest to everyone. It was believed years ago, when zymotic diseases took a new start in sanitary investigation

and therapeutics, that we had found the philosopher's stone in antizymotic medication and antiseptic medicines. The idea advanced much in popular favor, and under its stimulus physisicians were active in the search for new antiseptics. It was held that, as infectious diseases were due to organic forms capable of maintaining life under certain conditions, means were available for so disturbing their life and development as to secure their arrest or destruction, and to cause diseases produced by them. Interesting results were obtained from experiments with antiseptic agents used for these purposes. Carbolic acid, salicylic acid, quinine and other remedies were freely used to these ends. There was a profuse outlay of antiseptic medication. But the harvest gathered was not in proportion to the seed sown and the laborious cultivation. The principle was correct, in all probability, but the administration of remedies was so imperfect as to render them inoperative. By knowledge still withheld, and by means yet unknown, it is probable that antiseptics will in the future be used, without injury or danger, that will disinfect the human organism. True, quinine, the best anti-periodic known, is the most competent remedy to arrest or destroy malarial fever. In relation to this entire subject of malaria, as *a materies morbi*, it should be a source of no little pride to every North Carolina physician to know that one of our own men, an honorary member of this Society, a gentleman of high abilities and great accomplishments, has written more ably upon the subject of quinine than any other American physician. In his voluminous writings upon this and other subjects of Southern medicine, particularly, this learned author has shown, especially in his valuable "Treatise on the Physiological and Therapeutic action of the Sulphate of Quinine," great research, and proved its capacity to render malarial poison innocuous when introduced into the system. I need scarcely mention the name of Professor Otis F. Manson, M.D., formerly of this State, and now a leading practitioner of Richmond. Professor Manson has rendered eminent service to medical science by his laborious investigations in this line. He has set forth with much ability the benefits of quinine in malarial pneumonia, cholera infantum, and other malarial complications and troubles connected with septic influences

malarial in character. But with all the antiseptic properties of quinine it is not reasonable, with our present knowledge of antiseptics, to expect any of them to meet the indications for antiseptic treatment under such forms of administration as are now recognized to be wise and safe. When the large volume made up by the fluids of the body is considered, with the fact that an antiseptic dose becomes diluted just in proportion to the size of this volume and the amount of these fluids, such an antiseptic dilution would result, and such a solution would be made, as would amount to a mere homeopathic dose. These difficulties show the source of the failure of antiseptic treatment internally.

We have an incentive and good reason for hope and expectation of good results of general antiseptic medicine in the triumphs of antiseptic treatment of diseases of the lungs. In the advances of sanitary medicine and practical therapeutics antiseptic treatment of pulmonary disease has assumed an importance hitherto unattained. The antiseptic treatment suggested from recent investigations in pneumonia, and the cause of tubercular consumption attracts wide attention More and more does it unite with other evidence in giving strength to the opinion that the general principle of antiseptic treatment is correct. It is not so new in relation to the lungs, because Hippocrates and Galen recognized and practiced it. They did so in their prescriptions of balsamic vapors and other inhalations in pulmonary affections, and in their advice to patients suffering with pulmonary disease. Those living in low, moist, warm places were advised to leave and to take up their residence in elevated regions, and in a dry, bracing atmosphere. They recommended them to live in the vicinity of Vesuvius and Ætna, where they could inhale sulphur vapor and sea air. The celebrated Dr. Rush, of Philadelphia, treated pulmonary disease upon similar views as did others of our early fathers in medicine. But it remained to modern research to reduce these views to a better system and to more efficient practice. Anatomy teaches that the lungs are the only deep-seated organs that admit of an immediate contact of air. Can medication be applied immediately to them? Investigation unites with experience in showing that medicinal agents *can* be brought in

immediate contact with the pulmonary surface. This being established, the question arises, have we any remedies, in the form of vapor or gas, that are inimical or destructive to the life. and activity of poisonous bodies or minute organisms in the lungs? The testimony is in the affirmative that there exists, *and can be found in the lungs of consumptive persons, infectious and septic matter, susceptible of being reached and arrested or destroyed by antiseptic treatment.* It has been shown that pulmonary consumption is pulmonary tuberculosis, and that tuberculosis is caused by the presence in the tissues of the lungs of an *infective organism.* Hence it is that the rational treatment of pulmonary consumption embraces the employment internally of antiseptic agents and placing the patient under antiseptic conditions. Koch's great discovery of the bacillus of tubercle paves the way for all this. This illustrious pathologist claims, by his experiments and microscopic examinations, to have discovered in the sputum of hundreds of cases of undoubted consumption this bacillus of tubercle. He goes still farther, and claims to have established the fact that bacilli are never found in any other disease of the lungs or in the lungs of healthy individuals. His discoveries and conclusions are corroborated and sustained by the investigations and experiments of others. Koch allowed the tuberculous sputum to dry and then inoculated animal's with it. He found that it was just as poisonous and fatal as when the inoculation was, with sputum, fresh and directly from consumptive lungs. The experiments of Koch have been repeated in any number of cases and uniformly with the same results. These facts prove the poisonous nature of bacilli and the infectious character of consumption. They show that the expectoration of a consumptive patient is impregnated with virulent matter, and how and why it is that consumption, outside of being inherited, or otherwise acquired, can be spread, and does spread, among the human family. Eminent British pathologists dispute his conclusions. High authority in Germany, and in our own country too, contend that bacilli have no etiological relation to tuberculosis, and that Koch's experiments prove nothing as to its contagiousness. Some of this unfavorable criticism seems founded upon actual pathological research. His critics contend that bacilli found in the lungs after death are often very few in

number; that extensive tuberculous processes are found in animals containing only few bacilli, and where it is certain that the bacillus was the only agent at work. They urge against his theory that the application of facts, obtained from experiments on animals, to the pathology of tuberculous diseases in man are not entitled to the significance claimed, and that it remains for further enquiry to show what relation these bacilli bear to the morbid processes in man in which they are found. Koch comes back upon his critics with much severity; contends that their experiments are improperly conducted; that they do not grasp the subject of bacterial pathology; and that their arguments are unfair and illiberal. However all this may be, facts and figures show that, while one out of about every six of the human family dies with some form, and in some stage, of tubercular disease, not more than one-third of all consumptive persons die from inherited consumption; and not more than one-third of consumptive parents transmit the disease to their offspring. There is no little ignorance and misapprehension in the public mind upon this feature of the disease. Many a one, whose father or mother died with consumption, gives up in despair and fails, when attacked with lung disease, to make proper efforts for recovery, because of the deep hold of this belief upon the popular mind. The impression, so often made upon the minds of the young, that, because their parents died with, or have, consumption, they, too, must fill consumptive graves, is not only erroneous, but is dispiriting and depresses hope. But, whether consumption originates from the action of consumptive *contagia*, or from the influence of hereditary transmission, or from other admitted causes, it is surely gratifying to know that we have now reached that advanced position as to its pathology and treatment from whence the outlook is more favorable than at any previous period. That tubercular sputum is infectious, especially in unfavorable conditions of ventilation, soil, climate and other surroundings, cannot well be disproved. If there is any force or value in demonstrated facts and scientific deductions, we cannot avoid the responsibility, as physicians and friends of preventive medicine, of guarding against consumptive infection—of advising precaution against possible infection of the healthy by consumptive patients. Antiseptic medicine,

so much imbued with the importance of preventable measures, recognizes these precautions. It does not confine treatment simply to antiseptic remedies proper, but allies itself with counter irritation over the lungs, reduction of fever and inflammation, and such additional remedies as will quiet nervous irritation, increase nutrition and promote sleep, appetite and good spirits. It is quick to insist that atmospheric and soil influences are potent upon the origin and progress of this dreadful disease. It teaches that inhalations of antiseptics and the use of respirators, though so much used by empirics to tickle the popular fancy and secure ill-gotten gains, are, under the operation of improved methods and new appliances, including removal from low, damp, warm localities, sources of relief, and not unfrequently curative. It declares that residence in malarious districts often so weakens the resistance of the vital forces that tubercle is the result. While a residence in more healthy regions, where the air is dry, pure and bracing, and the soil dry and free from injurious exhalations, often prevents its development and arrests its progress. Our own State is an example of the truth of these statements. Consumption seems to prefer our eastern planes, our malarious localities, our wet swamps and marshes, our low and sluggish streams and our warm Atlantic coast line; while Western North Carolina, with its magnificent climate and invigorating atmosphere and dry, healthy soil, is not a suitable breeding ground for it. It is one of the best health resorts in the world for those liable to tubercular disease, or who have it in incipient stages. There never was a greater mistake committed than to send patients upon whom this disease has firmly fixed its fatal fangs to Florida, or to similar low Southern latitudes, where the moist, warm, enervating air are so prone to give increased impetus to its destructive progress and to hasten mortality. The experience of consumptives every winter in Florida confirms this view. This principle in the treatment of consumption is well established, as we all know. It teaches new lessons in sanitary science and preventive medicine, as well as in therapeutics. But, while it utilizes the antiseptic system, and insists that pure air, good nutritious food, a dry atmosphere and plenty of exercise in mountain climates, as means best calculated to develop and

strengthen the respiratory organs, and to arrest or destroy tubercular disease, it also demands whatever other means will best invigorate the constitution and resist the approaches and attacks of bacilli or other septic invasions. It recognizes the duty of better fortifications against disease germs that are so constantly around and about our daily walks and habitations, seeking entrance in so many ways The fact that the germs of bacteria are sometimes found in the blood of those who have recently died, and who are enfeebled by slow disease, is significant. These germs, it seems, do not always wait for death, but assail the living, under favorable circumstances. They often put the vital forces to a severe test in the resistance needed to maintain supremacy. We may drink bacterial water, eat bad food, breathe air loaded with germs, live on germ-producing soil and in germ-originating houses, and still maintain apparent health. But persistance in such a course steadily weakens powers of resistance, disease more easily and more effectually assails, and premature death often follows. Nor is this all. Whenever these constant triumphs of sanitation and prevention reach, as reach they will, the removal of removable causes of disease, and science becomes able, as science will, to render the human organism an unfit breeding ground for germs—an unsuitable habitation for the life and activity of septic bodies and deleterious agents, then will medicine and surgery have reached an exactitude, certainty and success already foreshadowed. Serious difficulties will yield to genius, labor and investigation. Bright lights and guiding stars are streaming, through mists and darkness, upon us from beyond the waters, as well as from our own land of free thought, rich inventions and great discoveries. It is not given to many to possess the genius, the energy, the devotion, the love of science, the independence and capacity for hard and life-long labor of those who have brought, and are bringing, the profession to these shiniug heights of success. But *it is* allowed to most medical men to admire the enthusiasm, devotion and boldness, to love the high regard for truth, integrity and principle, and to venerate the continuous labor and unselfish course of action of those laborious men who have crowned our calling with so much honor. The truths they have extracted from the hidden recesses are for the healing of the

nations and the good of mankind. The severe labors, great researches and brilliant success in this line and in other respects, of eminent experimental pathologists abroad—such as Pasteur, of Paris, Koch, of Berlin, and Lister, of London, supplemented by the investigations and triumphs of so many of our own eminent physicians and surgeons, can but stir the admiration and pride of every true medical man. Thus it is that increased success has been reached in the diagnosis and treatment of disease, and richer lustre added to the bright escutcheon of our hallowed and glorious profession.*

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